MPEG4-AKR-NET03

Network Digital Signage Player

User Manual v3.0

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I. Introduction

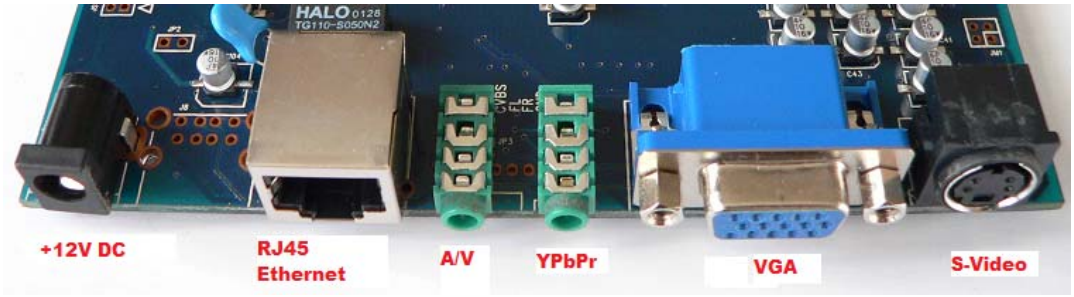
NDSP is a digital media player with LAN and Internet connectivity. With Ethernet connection and file transfer protocol support, digital media files(JPEG, MP3, MPEG1/2/4) can be downloaded and stored into CF card from host content server to multiple network players, and then playback repeatedly according to playlist's file sequence and pre-defined time schedule.

II. Board Spec and Components

- CPU: 32 bits RISC and 64 bits DSP dual processors (ES6425)
- Network: IEEE 802.3 Ethernet single chip (SMC 9113)
- Memory: 16MB SDRam, 2MB Flash Rom, EEPROM
- Video Output: Composite Video/S-Video/VGA
- Audio Output: 2 channel stereo
- Storage Device: Compact Flash type I/II slot
- Power: AC power adaptor input
- PCB: 4 layer design
- Others: RTC and battery, IR receiver

III. Evaluation Kit

- NP-25 network Player
- AC adaptor
- Remote control
- Audio/Video cables



IV. Playlist and Operation

1. **Playlist**:
   - **Playlist** is a script text file including command, time schedule, download filename and content server IP address for client to execute line by line.
   - **Playlist** is created by administrator using CAT (Client Administration Tool) software.

2. **Basic Operation without CAT (Server management software)**:
   - Pre-configure network setup and save. Network setup includes username, password, server IP, client DHCP or static IP, and HTTP or FTP server's URL address to download **playlist**. e.g. http://www.oemdomain.com/ndsp/ad/filename.mpl"
   - Administrator uploads **playlist** file into the specific URL path of HTTP or FTP server
   - Connect audio/video cables to any TV display, and Ethernet cable to RJ-45 connector
   - Power up unit, it will load network settings from EEPROM, initialize LAN, connect to internet and download **playlist** from fixed URL and store into CF card automatically
   - Interpret **playlist** file and execute tasks including download files, playback files, time schedule …etc. Playback media files repeatedly until stop or reboot command
   - Administrator can update new **playlist**, just keep same filename for network player to load new playlist file when player power-up manually, or daily reboot time is hit, or set pre-defined interval time that allow player to visit this URL.

3. **Server Monitoring and Management Tool – CAT (Client Administration Tool)**
   - CAT is a Windows application software to manage multiple client devices thru LAN or internet connection
   - CAT has many useful commands and editor tools to monitor and control client devices

V. Client Device Setup

1. Client board Installation

- High speed CF memory card is required (Sandisk Ultra II recommended)
- Use PC to format CF card with FAT32 selection for better performance
- Plug in CF card into CF slot
- Plug in LAN cable that connect to your LAN or internet network
- Connect video cable (RCA or S-Video) to your TV unit or VGA to your PC monitor
- Switch to right video source input channel on TV unit
- Connect audio cable to TV unit's audio connectors
- Connect AC power adapter
- Power on network player (led light should be ON and screen displays 'Initializing')

2. Client Main Menu

- TV screen will show "Initializing", "Initializing LAN", "Connecting DHCP Server..", "IP Address", "CF Card" then main menu

Note: It will take some time on the "Connecting to DHCP Server" depending on the IP assignment speed from network router

- Main menu will show the following items on left side
  - Client Local IP: xxx.xxx.xxx.xxx
  - Server IP: xxx.xxx.xxx.xxx or Host name
  - Time: 2007/06/01 15:30
  - MAC Address: xx-xx-xx-xx-xx-xx
  - Server Connection: ON or OFF or Error
  - Storage: xxxMB
- Main Menu will show the following items on the right side
  - Setup : press ENTER key to go into Client Setup screen
  - Storage : Press ENTER key to go to file folder of CF card

3. Client Setup Screen

- Use remote control to navigate and make changes
- Press ENTER from main menu to Setup screen
- Setup has 'Network', 'Time', 'Device Schedule', 'Auto Start', 'Language', 'Factory Default', 'Save and Reboot' and 'Return to Menu' selections.
- Press ENTER on any item to go to its page

'Network' Setup Screen

a. **User Name and Password**: Use "Select" or "Goto" key to open virtual keyboard. Move cursor to any letter and press ENTER, or use '0' (zero) to erase letter. After finished, press "Select" or " Goto" key again to exit virtual keyboard mode. Press ENTER key on 'user name' or 'password' to go to next page

b. **Server IP and Host Name**: Move cursor to select 'Server static IP' or 'Host Name'. Use numeric key pad of remote to type 3 digits for static IP or use virtual keyboard to type 'Host Name'. Press ENTER to next page. (Server IP is the PC's IP where your CAT program is running. Host Name is go out to

internet server)

c. **Server Port (new feature)**: default is 5021. If not, please use remote control to enter '05021'. This port number must match with CAT's. Please go to CAT's Server Setup Utility to modify server's port number if 5021 is already occupied. After port changed, close CAT and open again to make new port effective.
d. **Client DHCP or Static IP**: Move cursor to select 'DHCP' or 'Static IP' and press ENTER on 'Static IP' to Static IP page or DHCP to Setup screen. (DHCP is recommended.)

'Time' Setup Screen

a. **Time Server**: Use cursor left or right to select 'time.nist.gov' or 'windows.time.com'. Use cursor down to next item
b. **Date**: you can ignore this because client board will get internet time during power up initialization unless you don't have internet connection
c. **Time**: Same as Date
d. **Time Zone**: Use cursor left or right to select your local time zone
e. **DST**(Day Saving Time): Use cursor to select On or OFF. If On, it will add one hour
f. **Date Format:** This date format will appear on scroll bar only. User can select either mm/dd/yyyy or dd/mm/yyyy format.
g. Press ENTER on any field to go back to Setup screen

'Device Schedule' Setup Screen

a. **Reboot Time:** Move cursor to select 'OFF' or type 2 digits for daily reboot time. When time is up, client will reboot itself. If auto start is set to network mode, it will download new playlist file. Also player will send playback log data back to server for further usage.
b. **Device Schedule**: Move cursor to 'OFF' or 'ON'. If 'ON', another line below will display 'HH MM to HH MM'. Device ON time will turn on video and start to play from existing playlist file in the CF card. Device OFF time will turn off video and stop playing.

Auto Start Screen

a. OFF: After power up, client will do nothing and wait for server's command
b. Local CF: After power up, client will playback according to playlist file stored in the CF card or playback A-Z order files if no playlist file is found.
c. HTTP URL: Use CAT's client setup utility to enter network URL path. After power up, client will go to this URL path to download playlist file and execute action item listed in the playlist file. (also described on page 2 item IV)
d. iCAT: This is a web based management software like CAT, but iCAT allows user to use browser to access from any PC, anywhere. iCAT is not like CAT has more interactive commands. iCAT is more schedule-oriented automatic method. Get 10 digit ID from iCAT program's "Add player". When player powers up, it will login to iCAT server, user will see its on-line. For more detailed, please refer to iCAT user guide document.

Language:

If revision # on the main menu has 'U' which means European fonts are installed. Selections are 'English', 'East-South European', 'Western European', and 'Turkish'. This font is used for RSS and instant message display on the scroll bar.

Factory Default: load pre-defined values into Setup settings. For example;

a. Device Name: NDSP01 b. Password: 123 c. Server IP: 192.168.1.106
d. Server Port: 5021 e. Device IP: DHCP

Save and Reboot: save all the changes and reboot client

Return to menu: just return to main menu

[Note-1]: All these client setup settings can be modified in the "Client Setup Utility" of CAT software. You can save as "autoconfig.mia" filename into CF card then plug into CF slot and power up client board. It will show "Auto Updating" message and save into EEPROM. Remove CF card and delete this file to avoid reload again.

[Note-2]: You can save as "autoconfig.mib" filename, it will do the same thing to update EEPROM except this autocinfig.mib file will be deleted after update.

4. Remote Control Key Definition

Label (EG-D10)	Label (MP715 Remote)	Remote Key Function
Main Menu	SEARCH	Switch to main menu screen from SmartNavi screen
Video Mode	TV MODE	Switch between S-Video/Composite Video and VGA output
Keyboard	SELECT	Only available in Setusp screen to **enter or exit** virtual keyboard page (use key '0" as erase key)
MUTE	MUTE	Mute/Un-mute sound
VOL +	VOL +	Sound level control
VOL -	VOL -	Sound level control
Position +	SHUFFLE	Adjust down scrolling text bar position
Position -	EDIT/PROGRAM	Adjust up scrolling text bar position
Background Color	TITLE	Background color for scrolling text bar (8 colors)
Foreground Color	SUBTITLE	Foreground color for scrolling text bar (white and black)
Transparent	REPEAT	Scrolling text transparent level (0%, 25%, 50%, 75%, 100%)
Speed	ANGLE/ROTATE	Scrolling text speed settings (fast, normal and slow)
Scroll Bar Clock	A-B	Turn On/off Clock display on the scrolling text bar
EZ-Play	>> FORWARD	Do auto download/playback files in A-Z order from CF card or execute "playlist.mpl" file in the CF card

5. Scrolling Text Format

A regular .txt file can be used to store any text data including English, Chinese or Japanese. This text file data will be scrolled like stock symbol or news ticker along with

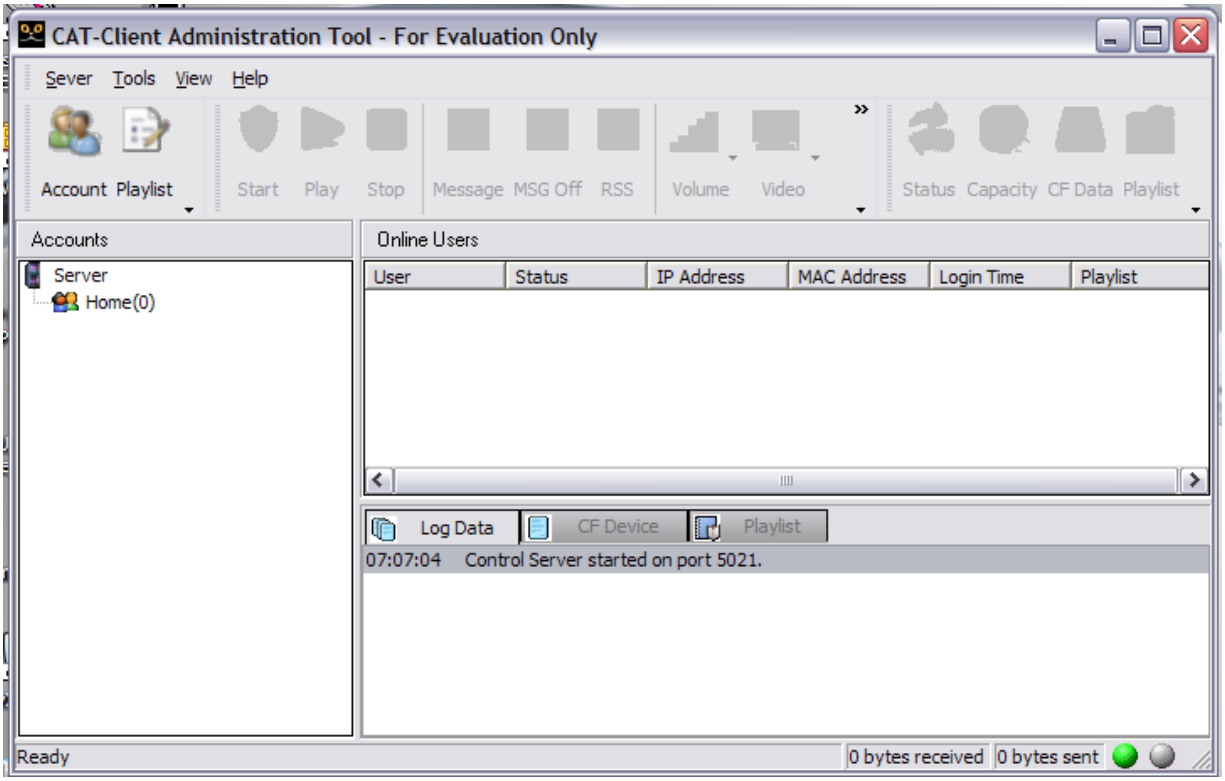
any photo or video file.
At the 1st line of the text file, user can program some settings for the text color, and position.
osd_settings=[B/G color], [F/G color], [Transparent], [Speed], [Font Size], [Clock]
e.g. “osd_settings=2,1,0,0,0,0

1. B/G color: a digital number from 0 to 7 (0blue, 1grey, 2red, 3ligh blue, 4green, 5yellow, 6magenta, 7orange)
2. F/G color: 0(white). 1(black)
3. Transparent: 0(no transparent effect), 1(75%), 2(50%), 3(25%), 4(100%)
4. Speed: 1(slow)，2(normal), 4(fast)
5. **Clock/Date**: 1(On), 0(Off)

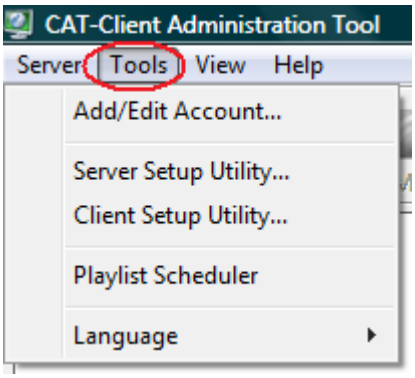
[Note]: Defaults are white color text on grey color background if no OSD_Setting line.

VI. CAT Software

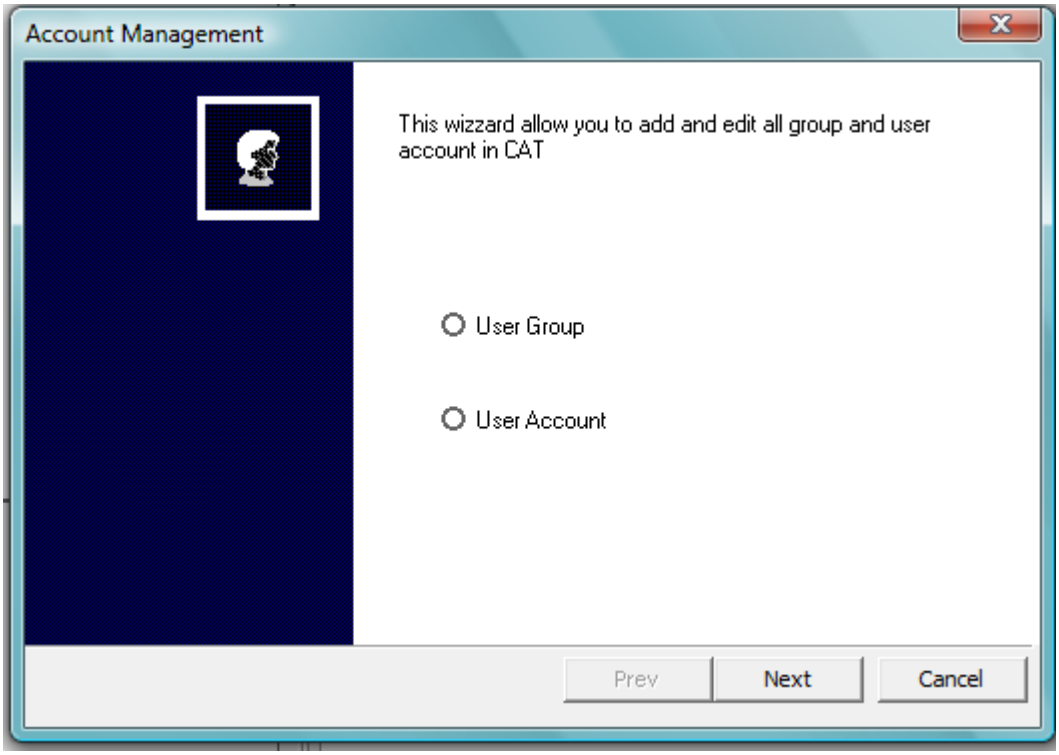
1. **CAT** (Client Administration Tool) can be executed on any Windows XP system. Just click on CAT.exe, it will display like photo below. **Home** is the default group.



2. When click Tool tab, it will pull down useful tools (see photo below). CAT UI and language can be customized per request.



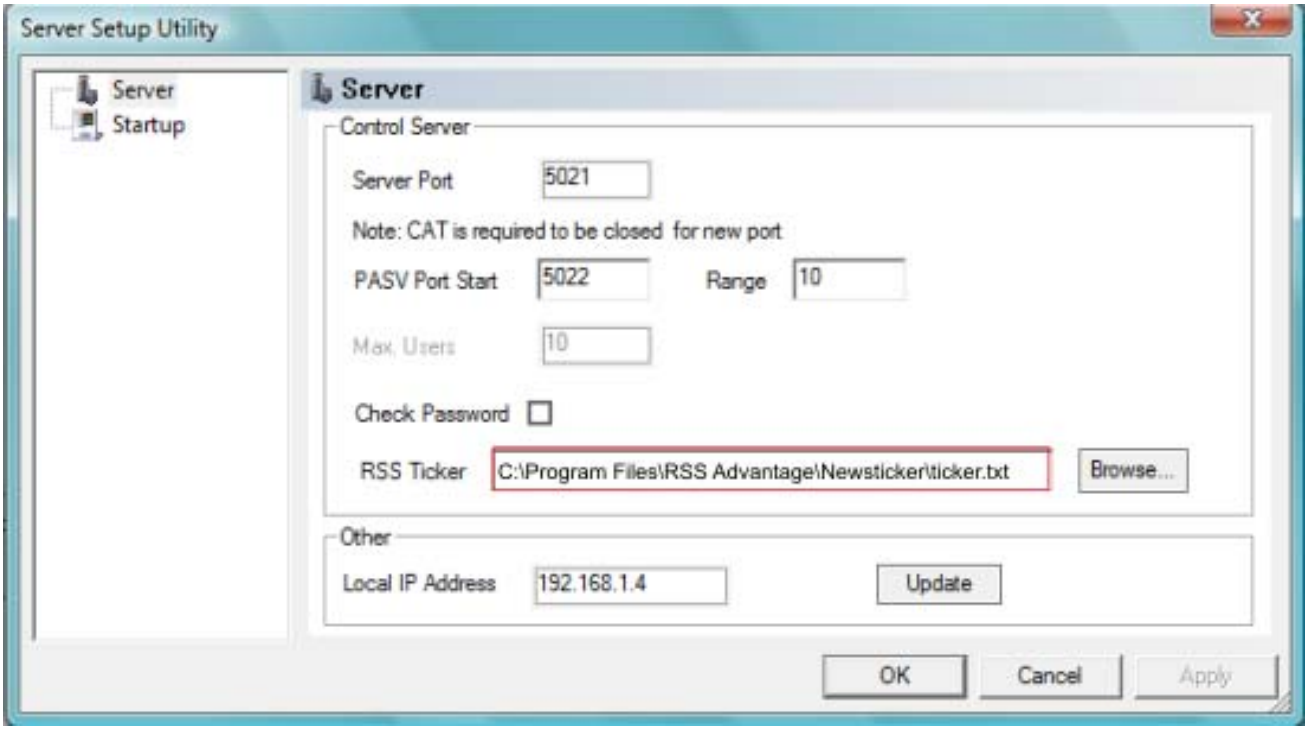
3. **Account** is to create or manage group name and user account name. You can create multiple groups and assign different account names. When any client logs into CAT, it will go under its corresponding group if account name is matched. If not matched, it will go under default Home group.



4. **AutoPlay** is a new feature after V0225. When players power up and log in to CAT, CAT

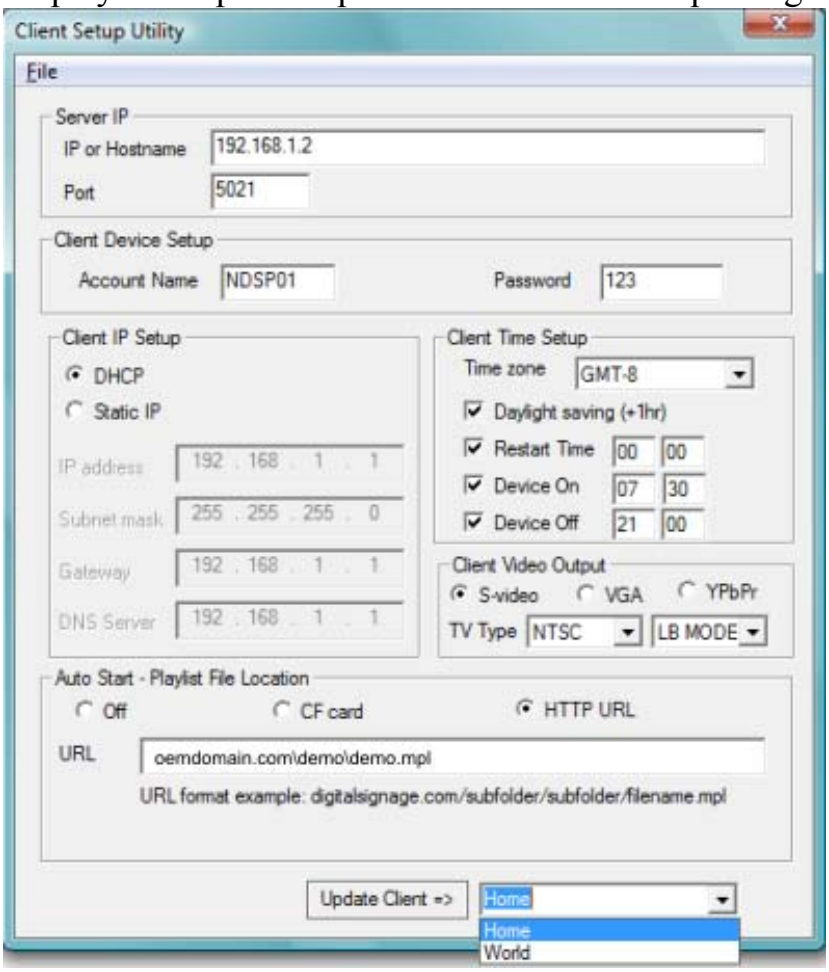
will automatically send playlist file and its content media files as specified here. Instead of EZ-Play (manual mode), this AutoPlay mode can be more useful for users. For AutoPlay mode, make sure AutoStart=CAT in the player Setup. It won't work if AutoSart=http URL.

5. **Sever Setup** is for administrator to make changes for CAT server.
    a. Server port 5021 is for port forwarding function of network router to access CAT program.
    b. PASV default port starts from 5022 – 5031 and can be changed to match company's firewall setting. This is for player to connect CAT using internet and thru company router and firewall.
    c. Current version allows up to 10 client devices to log in. You need to contact your supplier for more users copy.
    d. RSS Ticker: Default is set, but can be changed to match your PC's path and filename. When RSS ICON is clicked, CAT will send this file to players.



Note: CAT is required to be closed for new port change! Then open again to take effective.

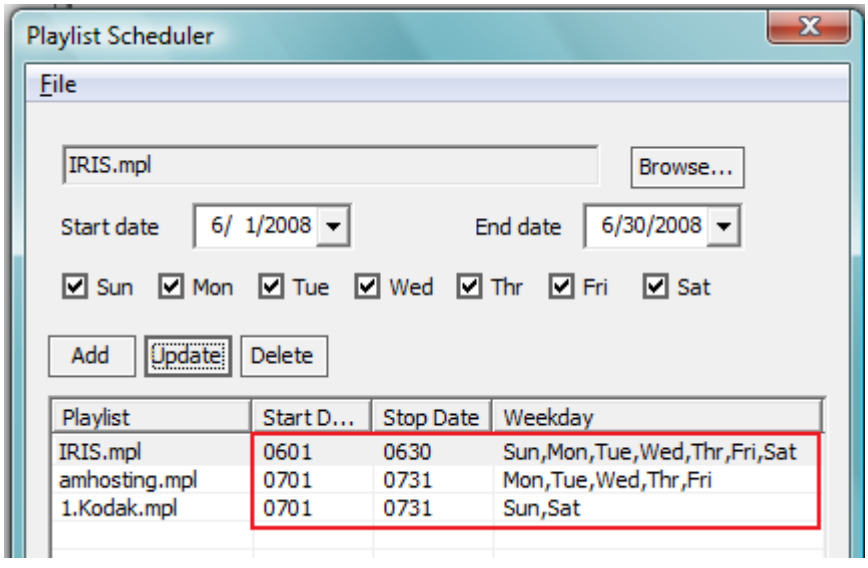
6. **Client Setup** is an editor to create or open autoconfig.mia file. This file is used to update client's setup values. Save autoconfig.mia into CF card, then plug into network player and power up. It will show "Auto Updating" message and then reboot again.



a) **IP or Hostname:** Type in static IP for local LAN server or hostname for remote internet server. Example: 192.168.1.100 or www.oemdomain.com
b) **Port:** default is 5021. If 5021 is used on the server side, then change to different number. But make sure also change same port # in CAT and router's port forwarding setting.
c) **Client Account Name and Password**: Type in user name and password for this client device. After client powers up and logs into CAT server, it will go to its matched group.
d) **DHCP or Static IP:** Select Dynamic IP by router or fixed static IP for client device
e) **Time Zone**: Select your local time zone
f) **Daylight Saving**: Check will add one hour
g) **Reboot time**: Check will reboot client when time is hit
h) **Device On**: will turn on video and start to play from existing playlist file in the CF card when time is hit
i) **Device Off**: will turn off video and stop playing when time is hit
j) **Video output**: select S-Video(including Composite video), VGA, YPbPr output. You can use 'Angle' or "Video mode" key on remote control to switch
k) **Off/CF Card/Http URL Address**: type in URL address and playlist filename, so client will download playlist file from remote URL and execute.
l) **Update Client** is a remote command. It will send current settings to all client devices of the selected group. Client device will reboot after save settings into EEPROM. It will take approximately 15-20 seconds to reboot till re-login.

7. Playlist Scheduler

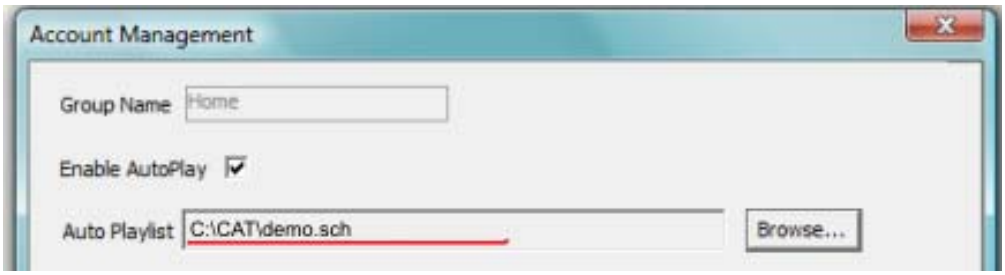
This is a new feature for AutoPlay mode. User can program advanced schedule instead of daily schedule only. Firmware version must be v0508 or after to work with this feature.



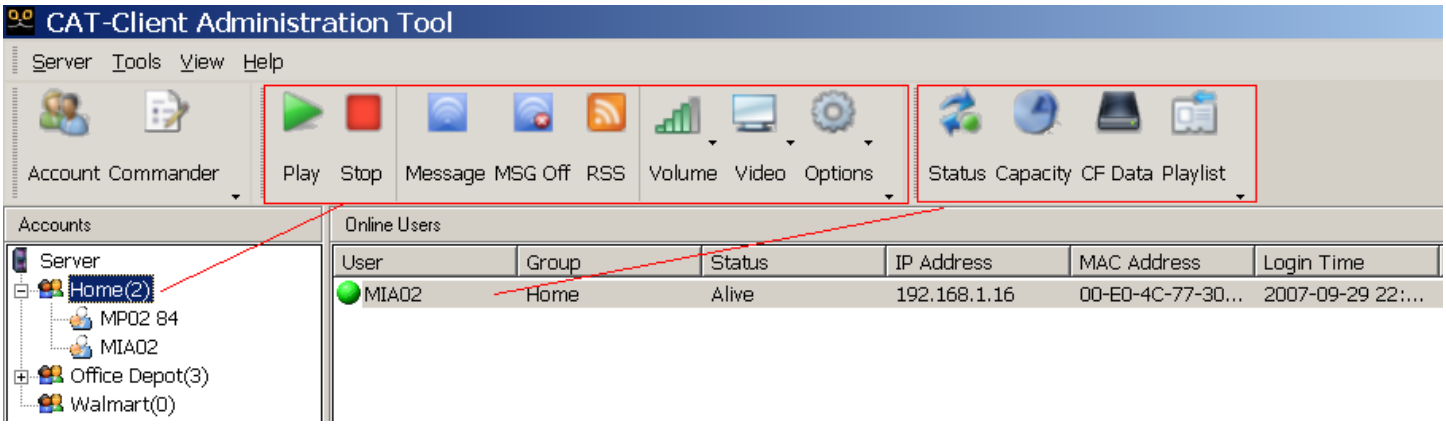
a. Make sure when you create playlist.mpl file in the playlist editor, and save into same group folder. Ex. Home group, then save into

CAT\Home\.

b. Browse your predefined playlist file from same group folder and enter start date, end date and weekday for this playlsit's campaign schedule then click 'Add'. You can repeat to add more playlist file with different schedule.
c. From above picture, you can set one month program with weekday and weekend campaign. Media file's start time and end time are set in the playlist editor.
d. Make sure you don't conflict your playlist with two same date schedules.
e. Click File to Save your current schedule into a .sch filename into same group name's folder. Ex. CAT\HOME\1.test.sch
f. Go back to Account-> Select Group -> Edit -> AutoPlay page and browse your .sch file, then click Finish
g. After all these settings, CAT will return a corresponding playlist based on this .sch file schedule when player login to CAT.



8. Graphics ICON:



From 'Start' to 'Options' Icon is the group command. Highlight cursor on the group is the active group. Command will be sent to all the client devices under active group.
From 'Status' to 'Playlist' Icon is the client command. Highlight cursor on the user name is the active client. Command will sent to this client only.

a) **Account**: create group and account user name for group management

Below is command that goes to all clients of same group, one by one.

b) **Play**: Send 'Playback' command manually to group of clients
c) **Stop**: Send 'Stop' command manually to group of clients
d) **Message**: Instant message editor will pop up. You can select any .txt file or manually type in text message, then send to group of clients. A news ticker type of OSD will scroll text from right to left on the bottom of client screen
e) **Message Off**: Send "Message Off" command to group of clients
f) **RSS**: Send RSS news ticker message to group of clients. Bundled 'RSS Advantage' software must be pre-installed. And Microsoft .net Framework 1.1 or 2.0 is also required for RSS to run.
g) **Volume**: It has Mute and 15 levels of volume. Will send volume command manually
h) **Video**: It has video ON or OFF to turn On/Off client's screen
i) **Options**: Less frequent use commands are located here.

- **Format**: Send format CF card command to client. All files in CF card will be erased.
- **Reboot**: Send reboot client command to client.
- **Group Status**: inquire all clients in the same group to send status back, similar to j)

Below is individual client command, not group command

j) **Status**: inquire client to send back current status data including time, current playback filename, music and instant message. Example: Playing [01:54:30] BATMANBEGINS_1.DIVX(5/11,16) 0:0:6, Scrolling Text: IntoTheBlue.txt
k) **Capacity**: inquire client to report CF card capacity and firmware version #. Example: Storage Total Size: 977MB, Free Space: 762MB. F/W version: v2.2.86.0619U
l) **CF Data**: Inquire client to report all the filenames on the CF card. It will display filenames on the CF tab screen of CAT.
m) **CF Data [Delete]**: Click right mouse button on CF window, a 'Delete' will pop up. You can check all the files to be deleted first then click 'Delete'. CAT will send delete command to client to remove those checked files and update CF Data screen.
n) **Playlist**: Inquire client to report current playlist file. It will display the playlist file order on the playlist tab screen of CAT

[Note] Log data:

When you move mouse cursor on the log window area, you can click right mouse button. A menu will pop up to choose "**Save As**" or "**Clear**". Clear is to clear up the log data. Save As is to allow you to save all the log history for technical support. You can send this .log file to your supplier for data analysis.

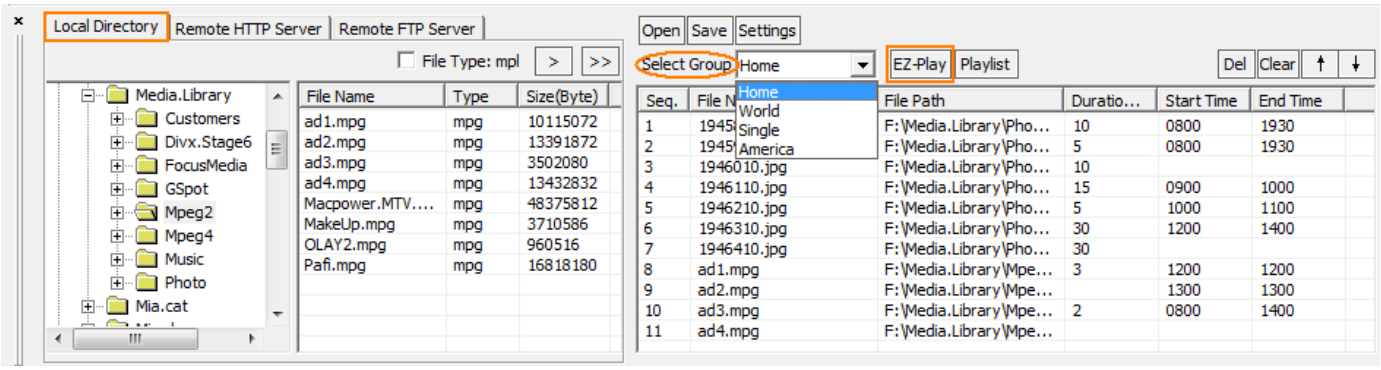
9. RSS Advantage Software

Firstly, install RSS software (RssAdvantage-1.0.2.3-ticker.UTF.zip) bundled by manufacturer (not from www.rssadvantage website). This is a RSS Feeds 2.0 application that allows administrator to manage their favorite RSS links. All the news tickers scrolling on PC screen will be mirrored to client device as long as RSS Icon button is pressed.

This is a basic version without some useful features. For example, there is no "Enable/Disable" on each individual RSS link. If you prefer to get full features, please click 'Help->About' to purchase upgrade version from here to get 10% discount.

[Note1]: RSS must be installed under C:\Program Files\RSS Advantage\Newsticker for CAT to fetch news ticker file.
[Note2]: Microsoft .net Framework 2.0 is required to install before RSS Advantage is operational. Search "Microsoft download framework" from any search engine or http://www.microsoft.com/downloads/details.aspx?FamilyID=0856EACB-4362-4B0D-8EDD-AAB15C5E04F5&displaylang=en

10. Playlist Commander



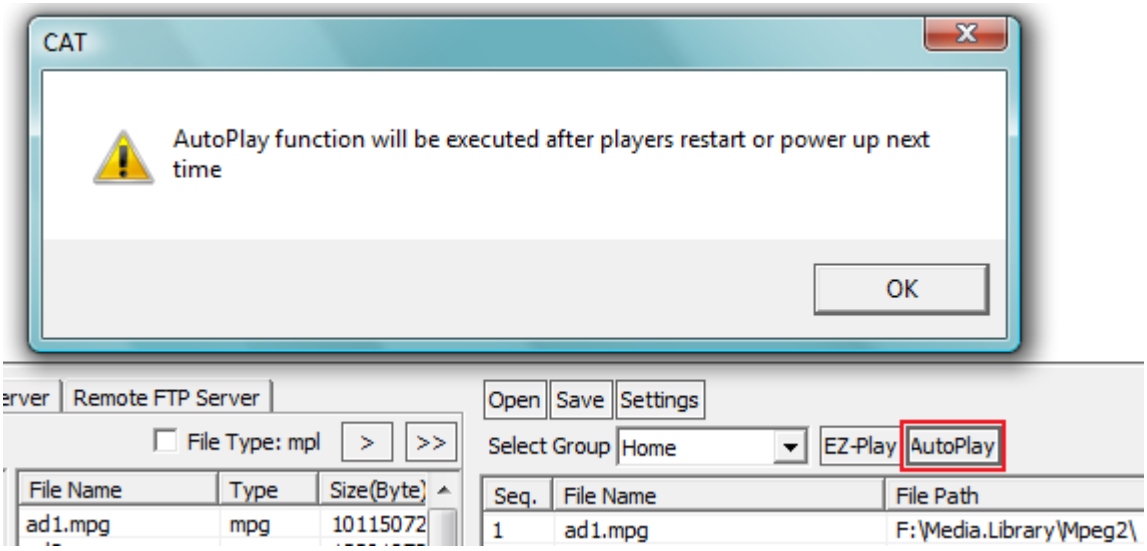
a. **Local Directory:** Load media files from local PC's directory. Once files are moved to right window, press 'EZ-Play' on selected group, server will transfer files to clients.
b. **Remote HTTP Server:** Type URL address and filename from remote HTTP server
c. **Remote FTP Server:** allow to log in any FTP and browse files to generate playlist
d. **File Type: mpl** : file filter check box is for playlist extension (.mpl) only. This feature is to support multiple playlist with time range settings.
e. Open: Open existing playlist file
f. **Save:** Save new playlist file or overwrite existing one
g. **>:** move single file to playlist window
h. **>>:** move all files to playlist window
i. **Select Group**: user must specify which group to execute "EZ-Play" and "Playlist"

buttons

j. **EZ-Play:** all the media files on the right playlist window will be downloaded to client and playback immediately. This is manual mode, controlled by user.

k. **AutoPlay: New feature on v.0225-**2008. 'Playlist' is changed to 'AutoPlay'. Create Autoplaylist.mpl file under that group and enable Autoplay mode.

This will not be effective until player reboot or power up next time. User can pre-assign playlist file for particular group's players.



l. **Duration/Times:** allow to enter loop counter for video file or duration time (seconds) for JPEG file

m. **Start Time/End Time:** (format:HHMM)

1. If time range is "blank" that means "always playback, no time limit for 24 hours".
2. Allow each media file to playback in its time range. For example, abc.jpg 30 0800 to 1200 means abc.jpg will be active for 4 hours, each time its duration is 30 seconds. Start to playback from 0800 onward, and stop to playback after 12pm.

Examples:

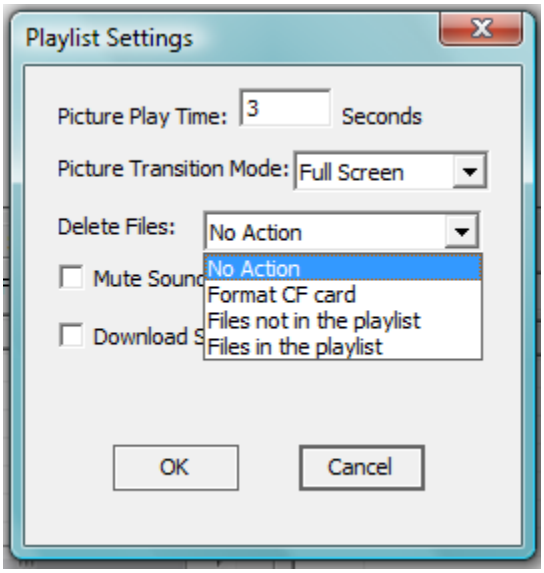
Filename	Duration/Counter	From hhmm	To hhmm	Comments
A000.jpg	Blank	Blank	Blank	A000 will display 3 seconds for 24 hours
A001.jpg	30	Blank	Blank	A001 will display for 30 seconds for 24 hours
A002.jpg	Blank	0800	1200	A002 will display 3 seconds from 8am to 12pm
A003.mpg	Blank	Blank	Blank	A003 video will play 1 time each loop for 24 hours
A004.mpg	3	0800	1200	A004 video will play 3 times each loop from 8am-12pm
P001.mpl	Blank	0800	1200	P001 playlist file will start from 8am to 12pm
P002.mpl	Blank	1200	1800	P002 playlist file will start from 12pm to 6pm

n. **Del:** Remove single file from playlist window

o. Clear: Remove all files from playlist window and reset values in the Setting menu

p. **Up/Down arrows:** Move up or down on the highlight filename to proper position

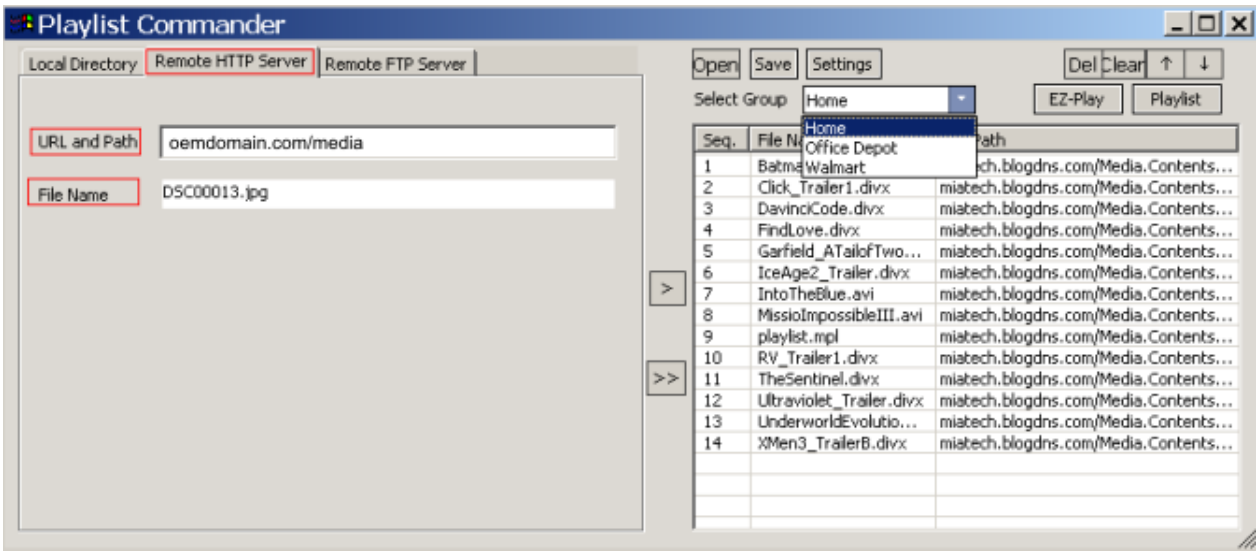
q. **Settings:** Some useful settings for playlist file



r. **Picture Play Time**: control interval time between JEPG files
s. **Picture Transition Mode**: 3 modes (Full screen, Random, and Cross Fade) are available to change picture transition effect
t. **Delete Files**:
    a. **No Action**: default value, do nothing.
    b. **Format CF card**: Will delete all files in the CF card then download new files based on playlist.mpl.
    c. **Files not in the playlist**: If CF card has many files, the files not in the playlist will be deleted. If on the playlist, will be kept to avoid download again.
    d. **Files in the playlist**: This is like multiple file deletion command. It will only delete files in the playlist.
u. **Mute Sound**: Mute sound in the playlist, all the content playback will be silent.
v. **Download schedule**: will write download time into playlist file. Player will not start download immediately until download time is up, then player will start to download content according to playlist file.

11. Remote HTTP Server

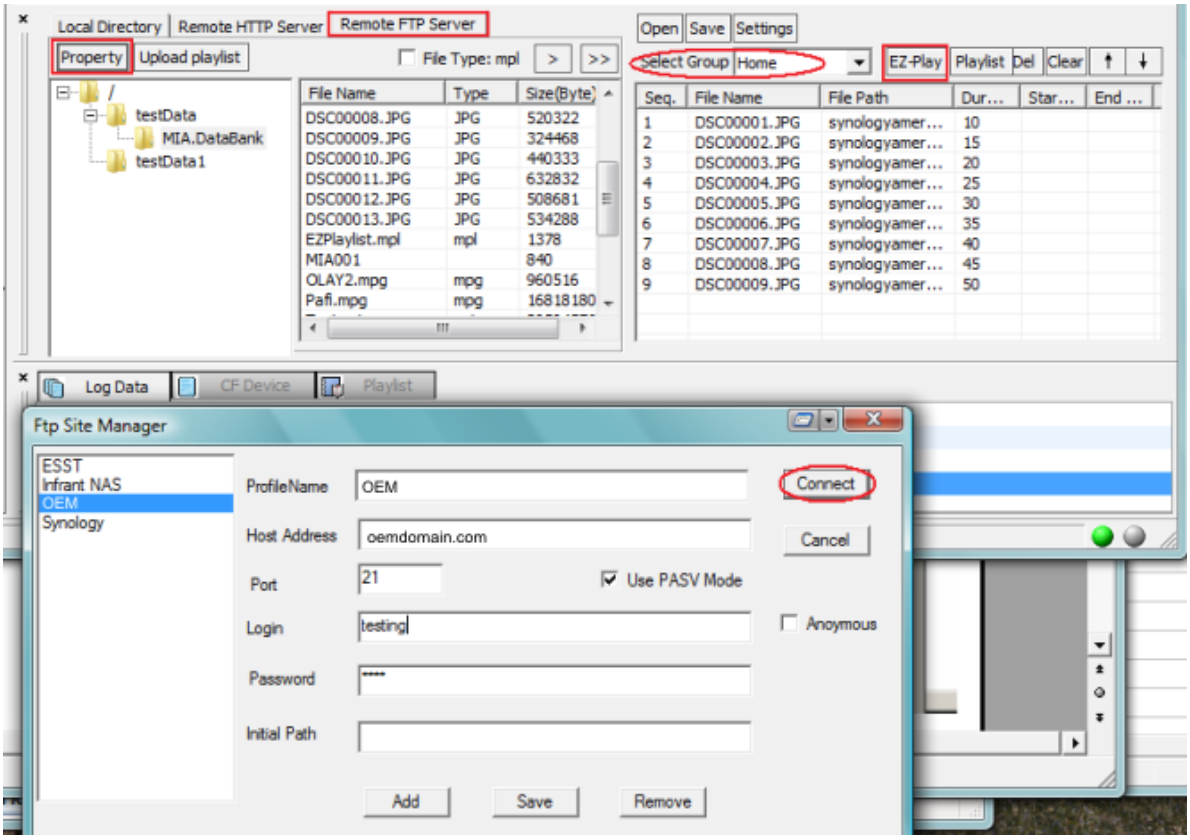
Playlist commander also supports HTTP server. Just type URL path and filenames in HTTP server storage. Click EZ-Play or save playlist file for future use.



12. Remote FTP Server

The feature allows user to access FTP server and create a FTP playlist. All the navigation is the same as local directory. But need to enter your regular FTP information including user name, password ..etc. You can click EZ-Play to execute immediately or save playlist for future use.

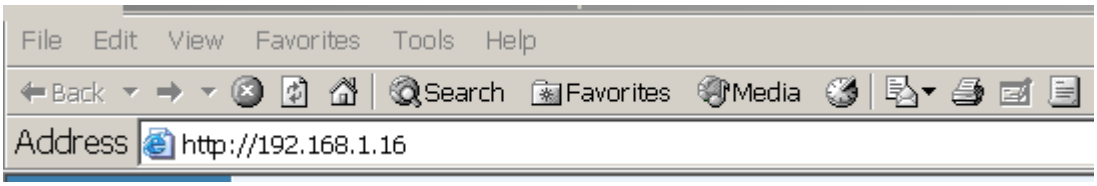
“Upload playlist” is a new feature from V0115-2008. When click, it will save the playlist file into FTP server where the file folder is instead of local hard drive directory. For example, ‘EZplaylist.mpl’ has been saved and uploaded under testData\MIA.DataBank folder. It can combine with auto start=FTP url to update your playlist file and reflect to player within 3 minutes. No need to use another FTP client software to upload playlist separately.



13. WebServer Configuration

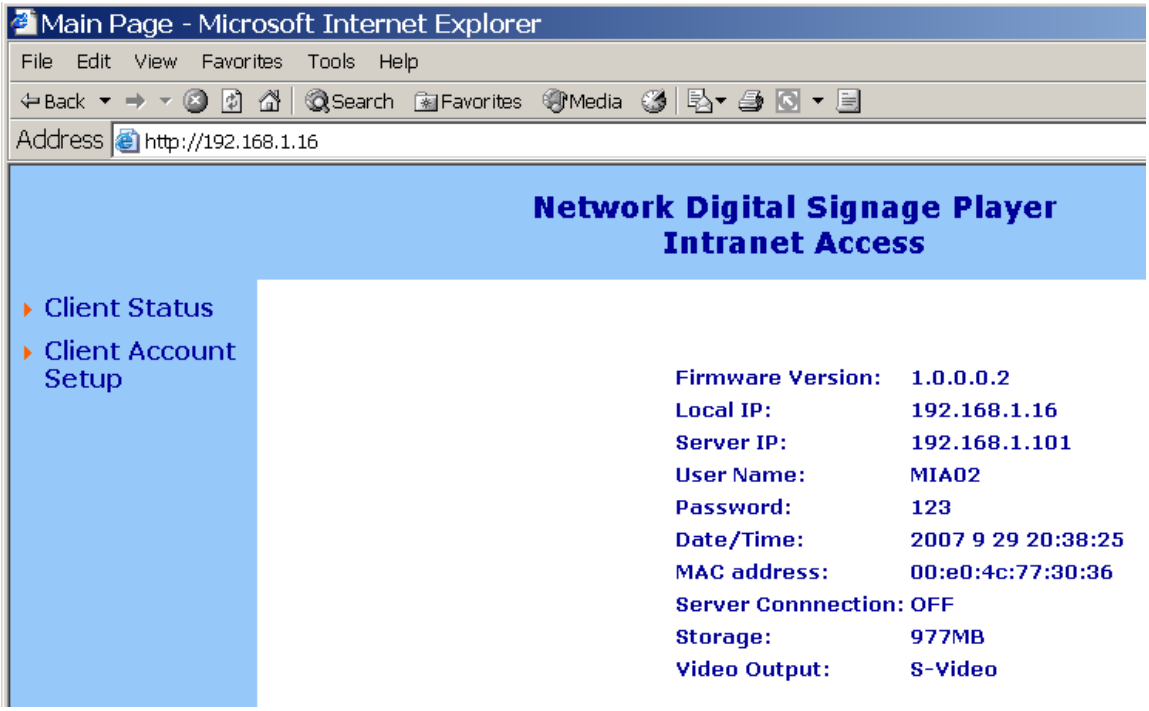
Webserver is a tool that allow administrator to read client device's current status and re-configure server's and client's IP, username and password from IE (Internet Explorer). In case Client's network setup values needs to be changed. Administrator doesn't need to go to client site and use remote control to change. Just use IE for remote control.

1) To use this function, open Microsoft IE and type client's IP address (for example 192.168.1.16) on the address line.

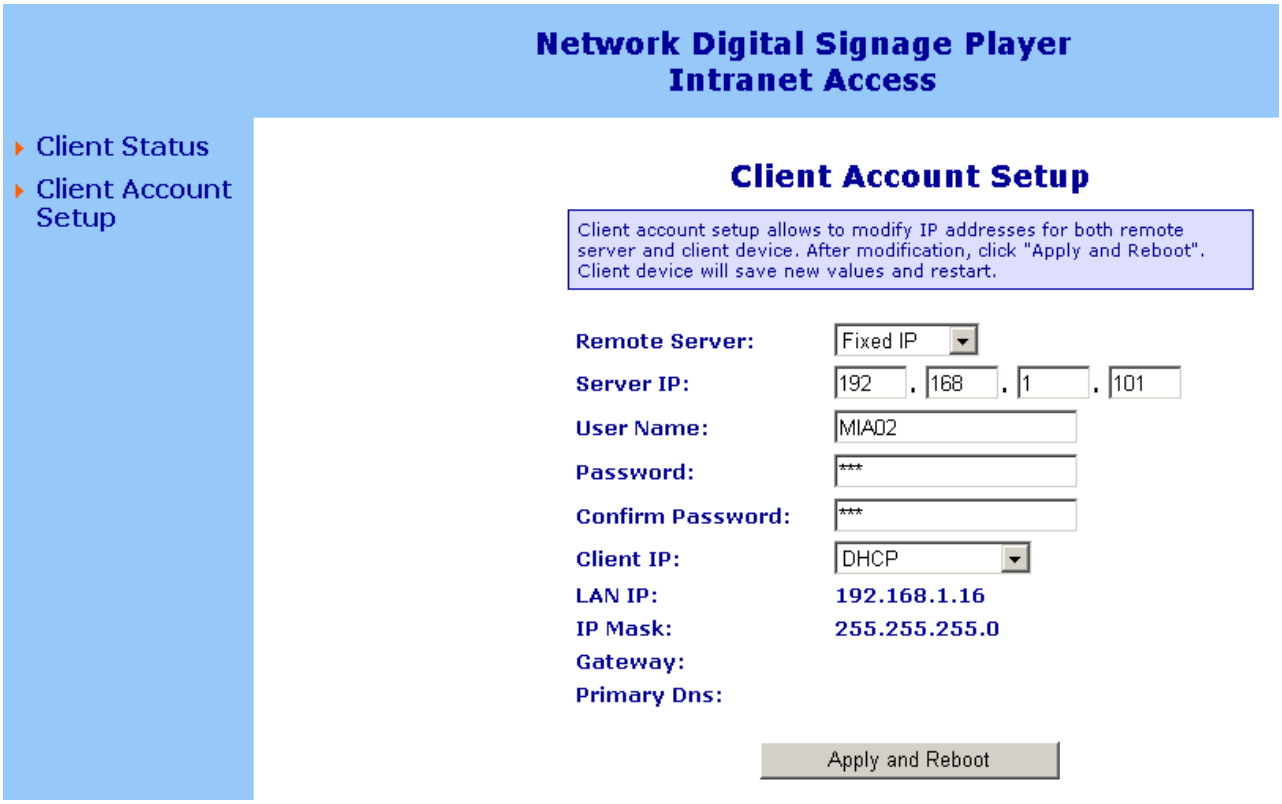


2) If IP is correct and client is in the same network, IE will pop up a confirmation window.
Enter username and password below. User Name = admin Password = admin

3) IE will read data back from client device and display status home page. Click Client Status on the left side, it will refresh screen for new update.



4) Click Client Account Setup on the left side, it will display Client Account Setup page



5) Remote Server has Fixed IP or Host Name selection. You can enter new Server's IP address if fixed IP. Or enter hostname (for example abc.blogdns.com) that CAT.exe is running.

6) Also you can change Client's account name and password to match CAT's client settings. So Client device can log in to Server's CAT program.

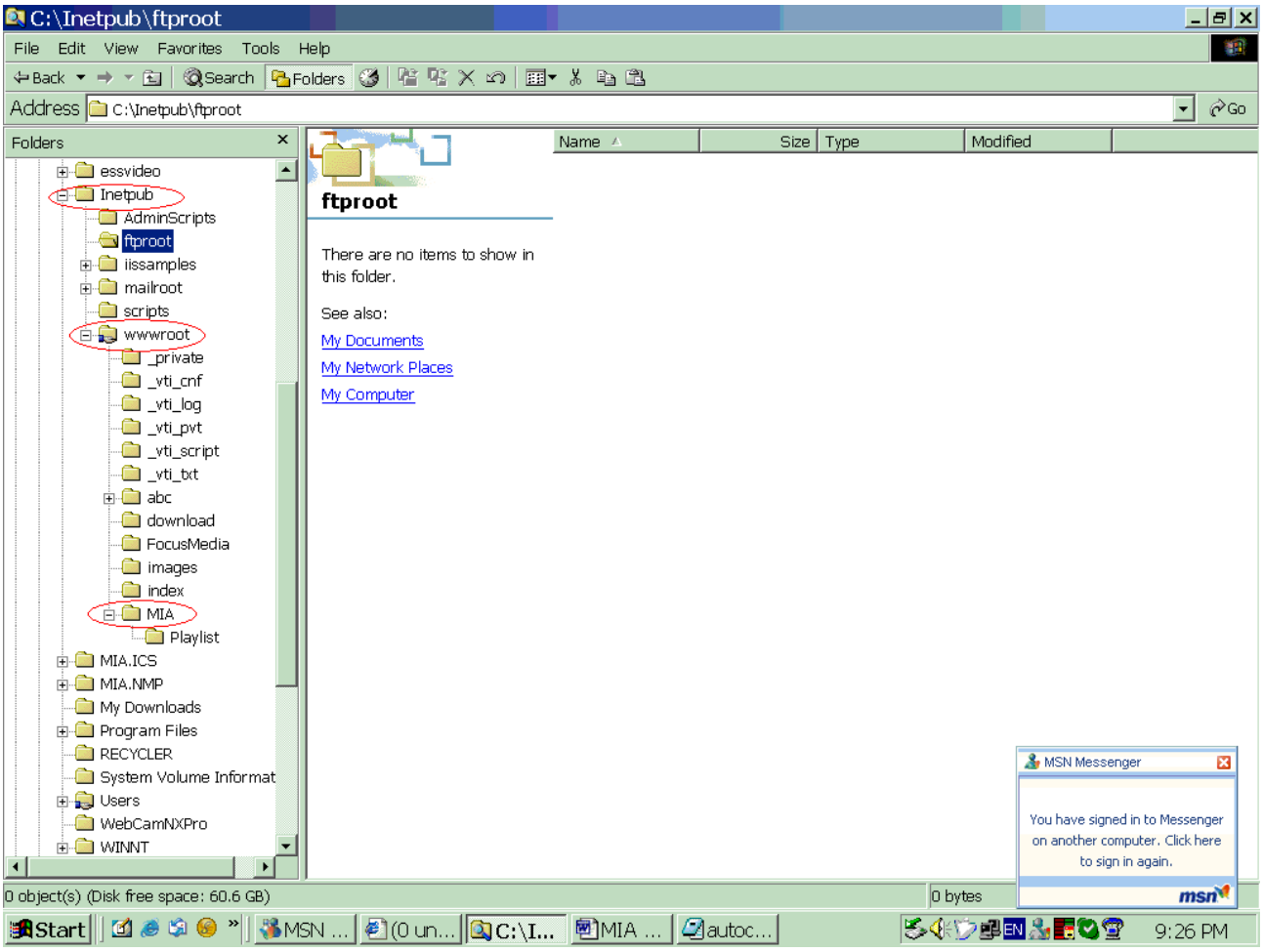
7) After all data is filled, click "Apply and Reboot". IE will send a configuration file to client device. After update into EEPROM, client will reboot and log in to new server IP. It will take 30 seconds for this reboot process. After 30 seconds waiting, click on "Client Status". Client device will send back status again for verification.

VII. HTTP Server Setup
1. Microsoft IIS

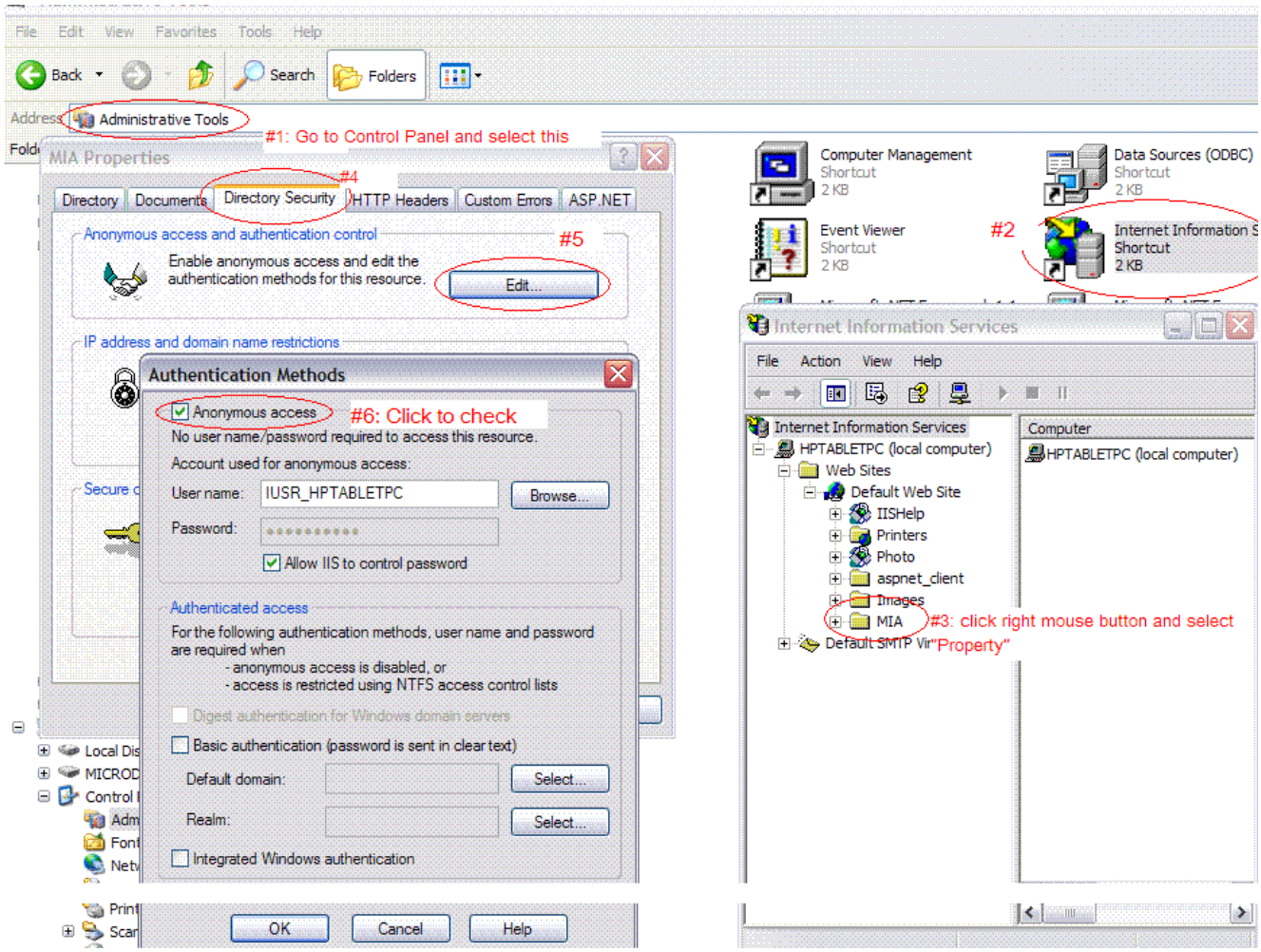
You need to setup your PC as HTTP server, so it can become a content server to send media files to client devices. Your Windows XP must be Professional version. Home edition has no IIS (Internet Information Services) to be used. (Note: But you can download freeware http server software from http://httpd.apache.org/)

A. Microsoft XP Pro IIS(Internet Information System) installation procedure:

1. Go to Control panel and select Add/Remove programs
2. Select Add/Remove Windows Components on the left column
3. Check "IIS (Internet Information Services)" and install, you may be asked to put Microsoft Installation CD.
4. After the installation is done, a subfolder will be created under C:\inetpub\wwwroot
5. You can create your subfolder to put your media files, also let wwwroot becomes a shared folder. So all the subfolders under wwwroot can be accessed from client's request.

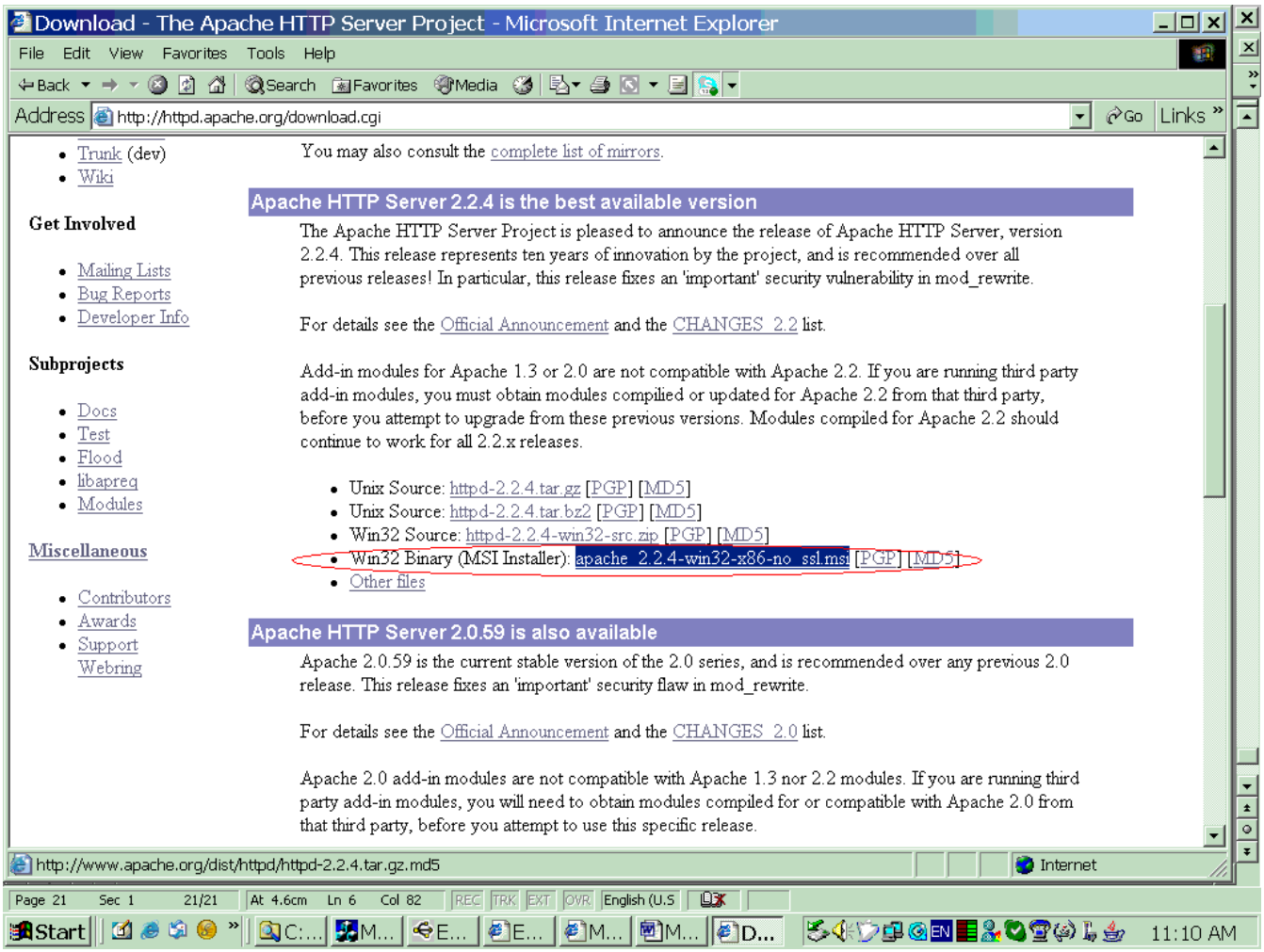


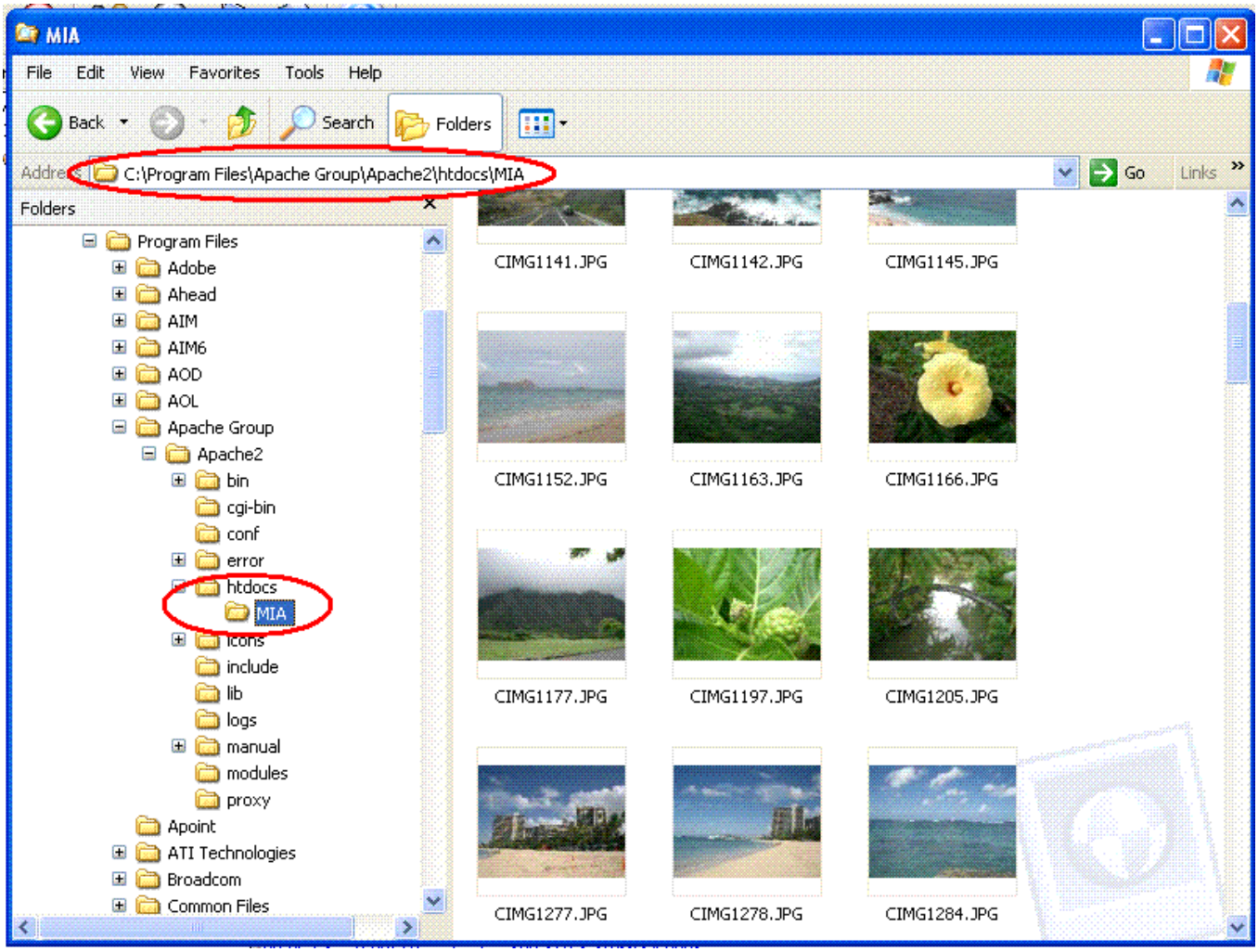
6. Important note:
If you encounter an http download error on CAT, it's possible that the anonymous access is not checked on the IIS property. Please follow below photo to check.
Procedure: Go to Control Panel->#1.Administrative Tools->#2.IIS Shortcut-> #3. shared subfolder -> #4 property/Directory Security -> #5. Edit -> #6. Anonymous Access


File Edit View Favorites Tools Help
Back Search Folders
Address Administrative Tools
#1: Go to Control Panel and select this
MIA Properties
Directory Documents Directory Security HTTP Headers Custom Errors ASP.NET
#4
Anonymous access and authentication control
Enable anonymous access and edit the authentication methods for this resource.
Edit...
#5
IP address and domain name restrictions
Authentication Methods
Anonymous access
#6: Click to check
No user name/password required to access this resource.
Account used for anonymous access:
User name: IUSR_HPTABLETPC
Browse...
Password:
Allow IIS to control password
Authenticated access
For the following authentication methods, user name and password are required when
- anonymous access is disabled, or
- access is restricted using NTFS access control lists
Digest authentication for Windows domain servers
Basic authentication (password is sent in clear text)
Default domain:
Select...
Realm:
Select...
Integrated Windows authentication
OK Cancel Help
Computer Management
Shortcut
2 KB
Data Sources (ODBC)
Shortcut
2 KB
Event Viewer
Shortcut
2 KB
#2
Internet Information S
Shortcut
2 KB
Internet Information Services
File Action View Help
Internet Information Services
HPTABLETPC (local computer)
Web Sites
Default Web Site
IISHelp
Printers
Photo
aspnet_client
Images
MIA
#3: click right mouse button and select "Property"
Default SMTP Vir
Computer
HPTABLETPC (local computer)

2. Apache HTTP Server Installation Procedure:

1. Go to http://httpd.apache.org/download.cgi to download apache_2.2.4-win32-x86-no_ssl.msi
2. Follow instructions to install
3. Copy content files to C:\Program Files\Apache Group\Apache\htdoc\ for download

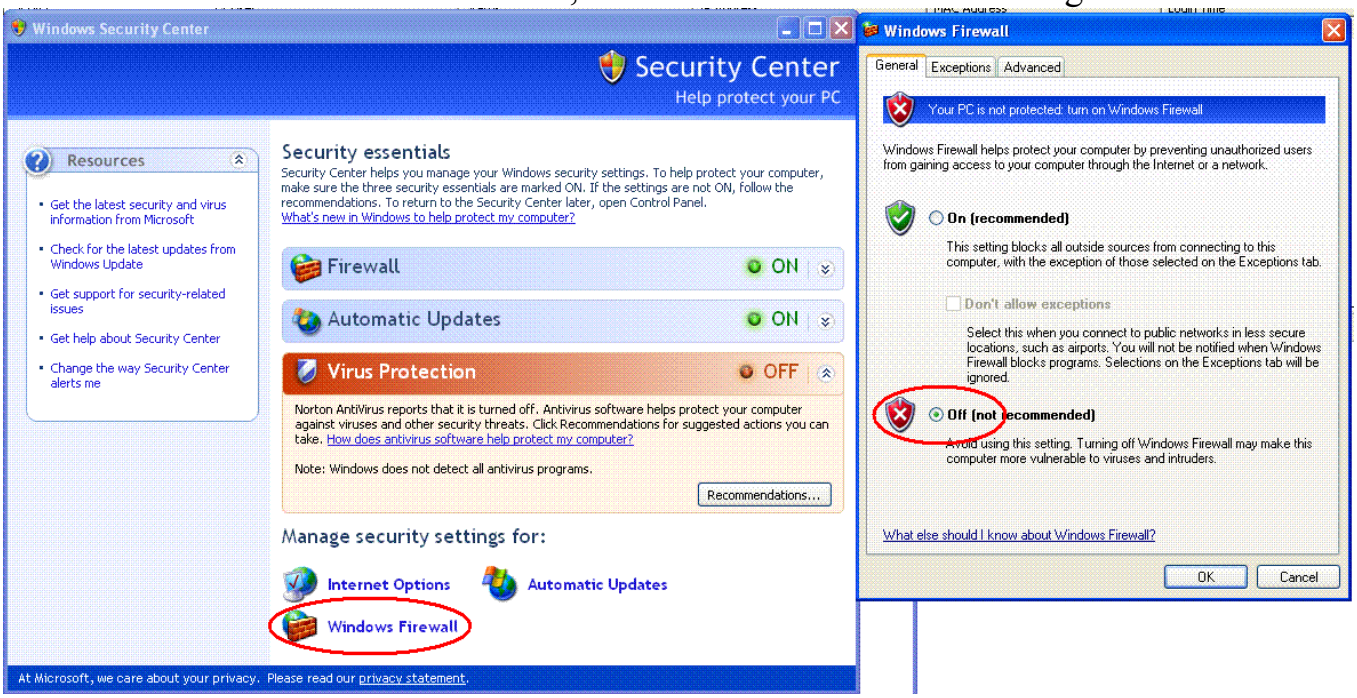

Download - The Apache HTTP Server Project - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://httpd.apache.org/download.cgi
Trunk (dev)
Wiki
Get Involved
Mailing Lists
Bug Reports
Developer Info
Subprojects
Docs
Test
Flood
libapreq
Modules
Miscellaneous
Contributors
Awards
Support
Webring
You may also consult the complete list of mirrors.
Apache HTTP Server 2.2.4 is the best available version
The Apache HTTP Server Project is pleased to announce the release of Apache HTTP Server, version 2.2.4. This release represents ten years of innovation by the project, and is recommended over all previous releases! In particular, this release fixes an 'important' security vulnerability in mod_rewrite.
For details see the Official Announcement and the CHANGES_2.2 list.
Add-in modules for Apache 1.3 or 2.0 are not compatible with Apache 2.2. If you are running third party add-in modules, you must obtain modules compiled or updated for Apache 2.2 from that third party, before you attempt to upgrade from these previous versions. Modules compiled for Apache 2.2 should continue to work for all 2.2.x releases.
Unix Source: httpd-2.2.4.tar.gz [PGP] [MD5]
Unix Source: httpd-2.2.4.tar.bz2 [PGP] [MD5]
Win32 Source: httpd-2.2.4-win32-src.zip [PGP] [MD5]
Win32 Binary (MSI Installer): apache_2.2.4-win32-x86-no_ssl.msi [PGP] [MD5]
Other files
Apache HTTP Server 2.0.59 is also available
Apache 2.0.59 is the current stable version of the 2.0 series, and is recommended over any previous 2.0 release. This release fixes an 'important' security flaw in mod_rewrite.
For details see the Official Announcement and the CHANGES_2.0 list.
Apache 2.0 add-in modules are not compatible with Apache 1.3 nor 2.2 modules. If you are running third party add-in modules, you will need to obtain modules compiled for or compatible with Apache 2.0 from that third party, before you attempt to use this specific release.
http://www.apache.org/dist/httpd/httpd-2.2.4.tar.gz.md5
Internet
Start
11:10 AM


MIA
File Edit View Favorites Tools Help
Back Search Folders
Address C:\Program Files\Apache Group\Apache2\htdocs\MIA
Go Links
Folders
Program Files
Adobe
Ahead
AIM
AIM6
AOD
AOL
Apache Group
Apache2
bin
cgi-bin
conf
error
htdocs
MIA
icons
include
lib
logs
manual
modules
proxy
Apoint
ATI Technologies
Broadcom
Common Files
CIMG1141.JPG
CIMG1142.JPG
CIMG1145.JPG
CIMG1152.JPG
CIMG1163.JPG
CIMG1166.JPG
CIMG1177.JPG
CIMG1197.JPG
CIMG1205.JPG
CIMG1277.JPG
CIMG1278.JPG
CIMG1284.JPG

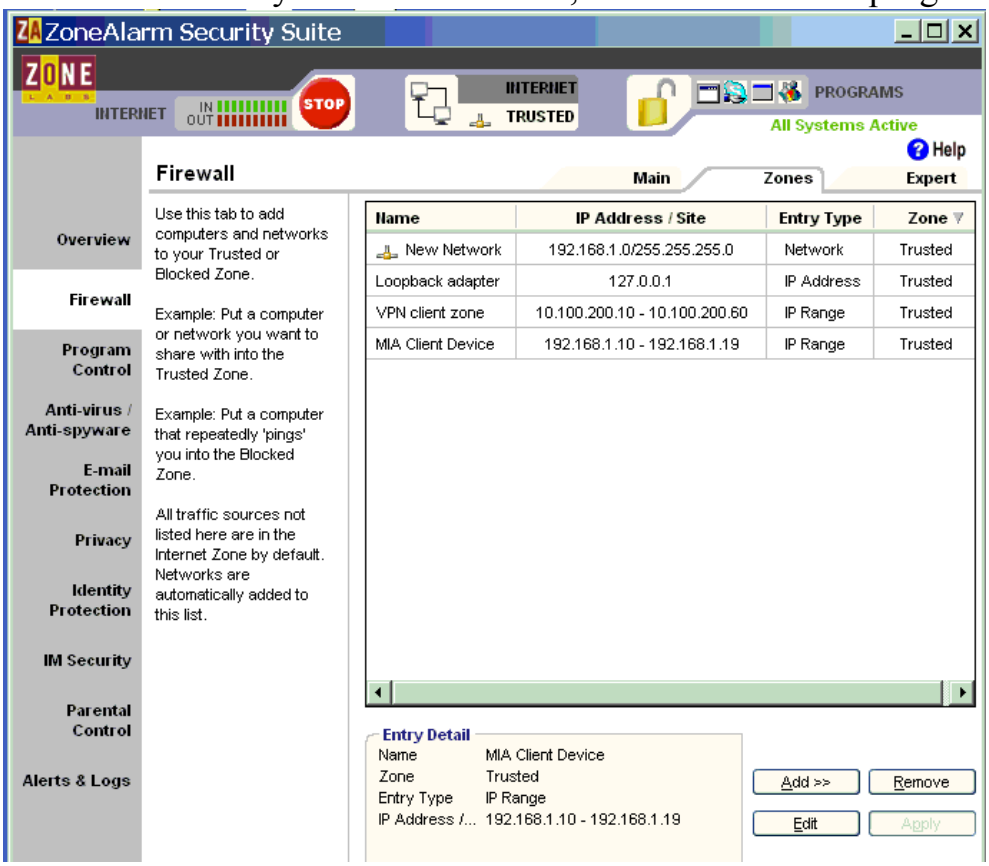
VIII. Firewall and Anti-Virus program Configuration

Also your anti-virus program or firewall may block ICS program.

A. Firewall: Set XP's Firewall to OFF, otherwise client is not able to log in to ICS.

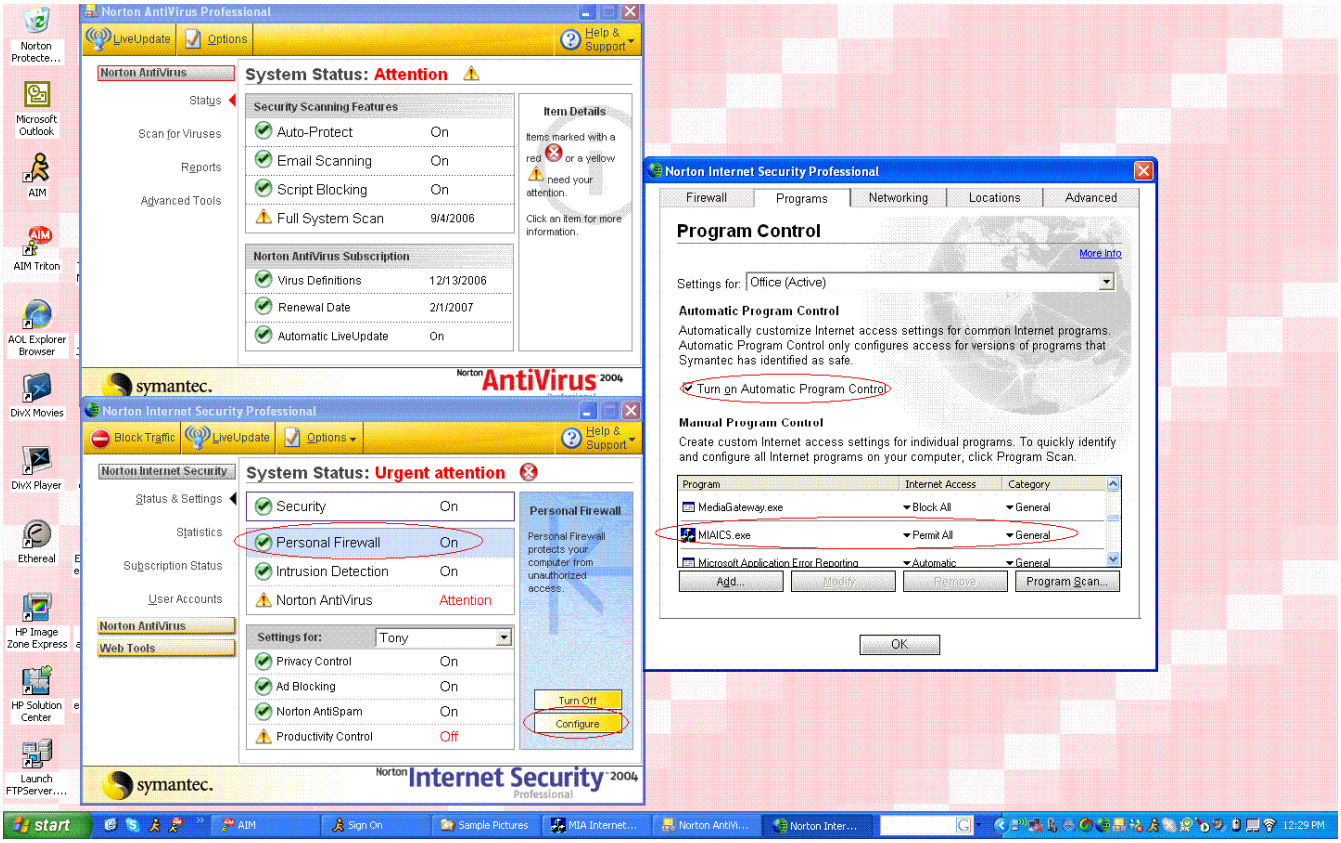

Windows Security Center
Security Center
Help protect your PC
Resources
Get the latest security and virus information from Microsoft
Check for the latest updates from Windows Update
Get support for security-related issues
Get help about Security Center
Change the way Security Center alerts me
Security essentials
Security Center helps you manage your Windows security settings. To help protect your computer, make sure the three security essentials are marked ON. If the settings are not ON, follow the recommendations. To return to the Security Center later, open Control Panel.
What's new in Windows to help protect my computer?
Firewall ON
Automatic Updates ON
Virus Protection OFF
Norton AntiVirus reports that it is turned off. Antivirus software helps protect your computer against viruses and other security threats. Click Recommendations for suggested actions you can take. How does antivirus software help protect my computer?
Note: Windows does not detect all antivirus programs.
Recommendations...
Manage security settings for:
Internet Options
Automatic Updates
Windows Firewall
At Microsoft, we care about your privacy. Please read our privacy statement.
Windows Firewall
General
Exceptions
Advanced
Your PC is not protected: turn on Windows Firewall
Windows Firewall helps protect your computer by preventing unauthorized users from gaining access to your computer through the Internet or a network.
On (recommended)
This setting blocks all outside sources from connecting to this computer, with the exception of those selected on the Exceptions tab.
Don't allow exceptions
Select this when you connect to public networks in less secure locations, such as airports. You will not be notified when Windows Firewall blocks programs. Selections on the Exceptions tab will be ignored.
Off (not recommended)
Avoid using this setting. Turning off Windows Firewall may make this computer more vulnerable to viruses and intruders.
What else should I know about Windows Firewall?
OK
Cancel

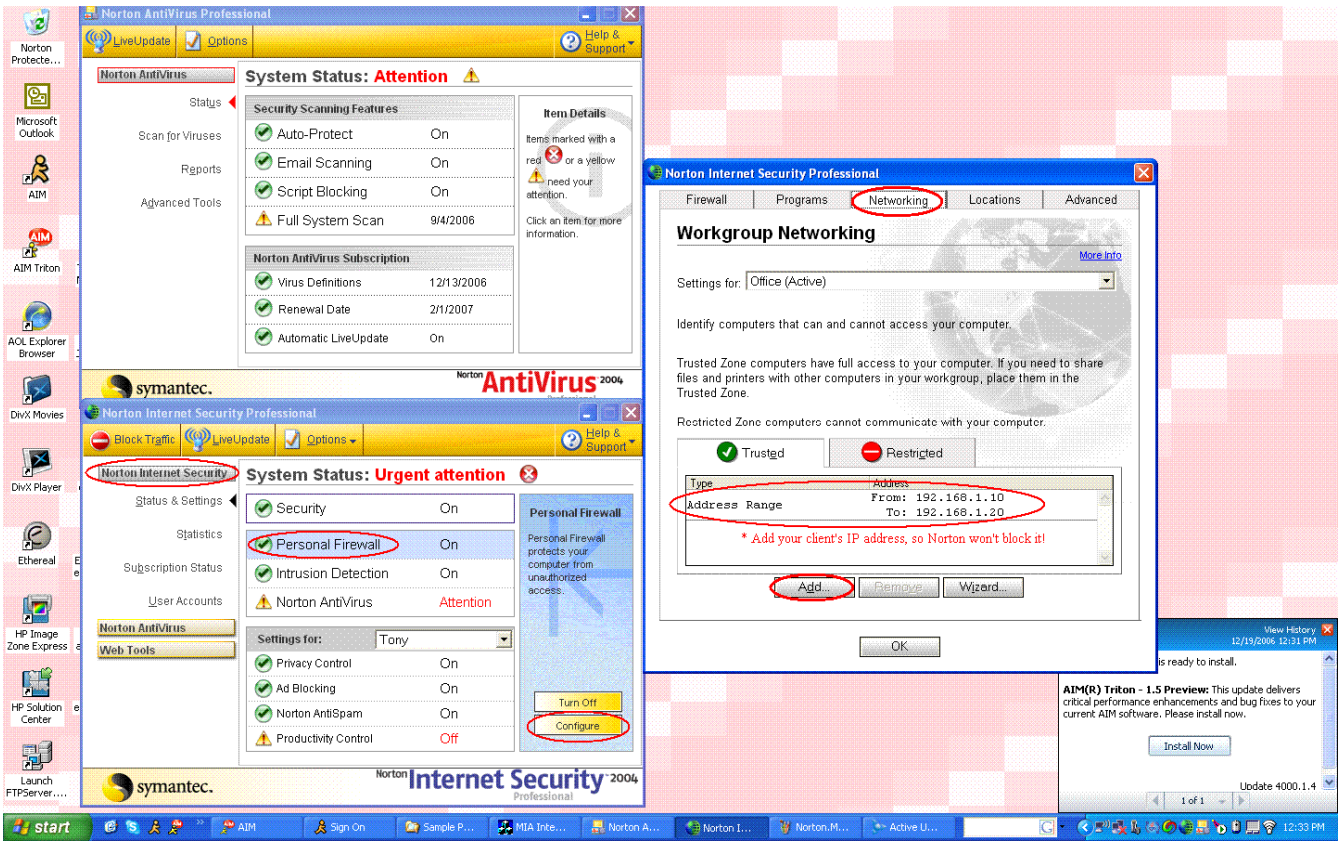
B. ZoneAlarm: If you use ZoneAlarm, add ICS as trusted program and IP range for clients.



C. Norton Anti-Virus:

If you are using Norton Anti-Virus program, make sure to add ICS as trusted program and also set IP ranges for client devices to go thru. Easiest way is to set Personal Firewall to OFF.


Norton AntiVirus Professional
LiveUpdate
Options
Help & Support
Norton AntiVirus
System Status: Attention
Status
Scan for Viruses
Reports
Advanced Tools
Security Scanning Features
Auto-Protect On
Email Scanning On
Script Blocking On
Full System Scan 9/4/2006
Item Details
Items marked with a red or a yellow need your attention.
Click an item for more information.
Norton AntiVirus Subscription
Virus Definitions 12/13/2006
Renewal Date 2/1/2007
Automatic LiveUpdate On
symantec.
Norton AntiVirus 2004
Norton Internet Security Professional
Block Traffic
LiveUpdate
Options
Help & Support
Norton Internet Security
System Status: Urgent attention
Status & Settings
Statistics
Subscription Status
User Accounts
Norton AntiVirus
Web Tools
Security On
Personal Firewall On
Intrusion Detection On
Norton AntiVirus Attention
Settings for: Tony
Privacy Control On
Ad Blocking On
Norton AntiSpam On
Productivity Control Off
Personal Firewall
Personal Firewall protects your computer from unauthorized access.
Turn Off
Configure
symantec.
Norton Internet Security 2004
Professional
Norton Internet Security Professional
Firewall
Programs
Networking
Locations
Advanced
Program Control
More Info
Settings for: Office (Active)
Automatic Program Control
Automatically customize Internet access settings for common Internet programs. Automatic Program Control only configures access for versions of programs that Symantec has identified as safe.
Turn on Automatic Program Control
Manual Program Control
Create custom Internet access settings for individual programs. To quickly identify and configure all Internet programs on your computer, click Program Scan.
Program
Internet Access
Category
MediaGateway.exe Block All General
MIAICS.exe Permit All General
Microsoft Application Error Reporting Automatic General
Add...
Modify...
Remove
Program Scan...
OK
start
AIM
Sign On
Sample Pictures
MIA Internet...
Norton AntiVi...
Norton Inter...
12:29 PM


Norton AntiVirus Professional
LiveUpdate
Options
Help & Support
Norton AntiVirus
System Status: Attention
Status
Scan for Viruses
Reports
Advanced Tools
Security Scanning Features
Auto-Protect On
Email Scanning On
Script Blocking On
Full System Scan 9/4/2006
Item Details
Items marked with a red or a yellow need your attention.
Click an item for more information.
Norton AntiVirus Subscription
Virus Definitions 12/13/2006
Renewal Date 2/1/2007
Automatic LiveUpdate On
symantec.
Norton AntiVirus 2004
Norton Internet Security Professional
Block Traffic
LiveUpdate
Options
Help & Support
Norton Internet Security
System Status: Urgent attention
Status & Settings
Statistics
Subscription Status
User Accounts
Norton AntiVirus
Web Tools
Security On
Personal Firewall On
Intrusion Detection On
Norton AntiVirus Attention
Settings for: Tony
Privacy Control On
Ad Blocking On
Norton AntiSpam On
Productivity Control Off
Personal Firewall
Personal Firewall protects your computer from unauthorized access.
Turn Off
Configure
symantec.
Norton Internet Security 2004
Professional
Norton Internet Security Professional
Firewall
Programs
Networking
Locations
Advanced
Workgroup Networking
More Info
Settings for: Office (Active)
Identify computers that can and cannot access your computer.
Trusted Zone computers have full access to your computer. If you need to share files and printers with other computers in your workgroup, place them in the Trusted Zone.
Restricted Zone computers cannot communicate with your computer.
Trusted
Restricted
Type
Address
Address Range From: 192.168.1.10 To: 192.168.1.20
* Add your client's IP address, so Norton won't block it!
Add...
Remove
Wizard...
OK
View History 12/19/2006 12:31 PM
is ready to install.
AIM(R) Triton - 1.5 Preview: This update delivers critical performance enhancements and bug fixes to your current AIM software. Please install now.
Install Now
Update 4000.1.4
1 of 1
start
AIM
Sign On
Sample P...
MIA Inte...
Norton A...
Norton I...
Norton.M...
Active U...
12:33 PM

IX. Router Setup

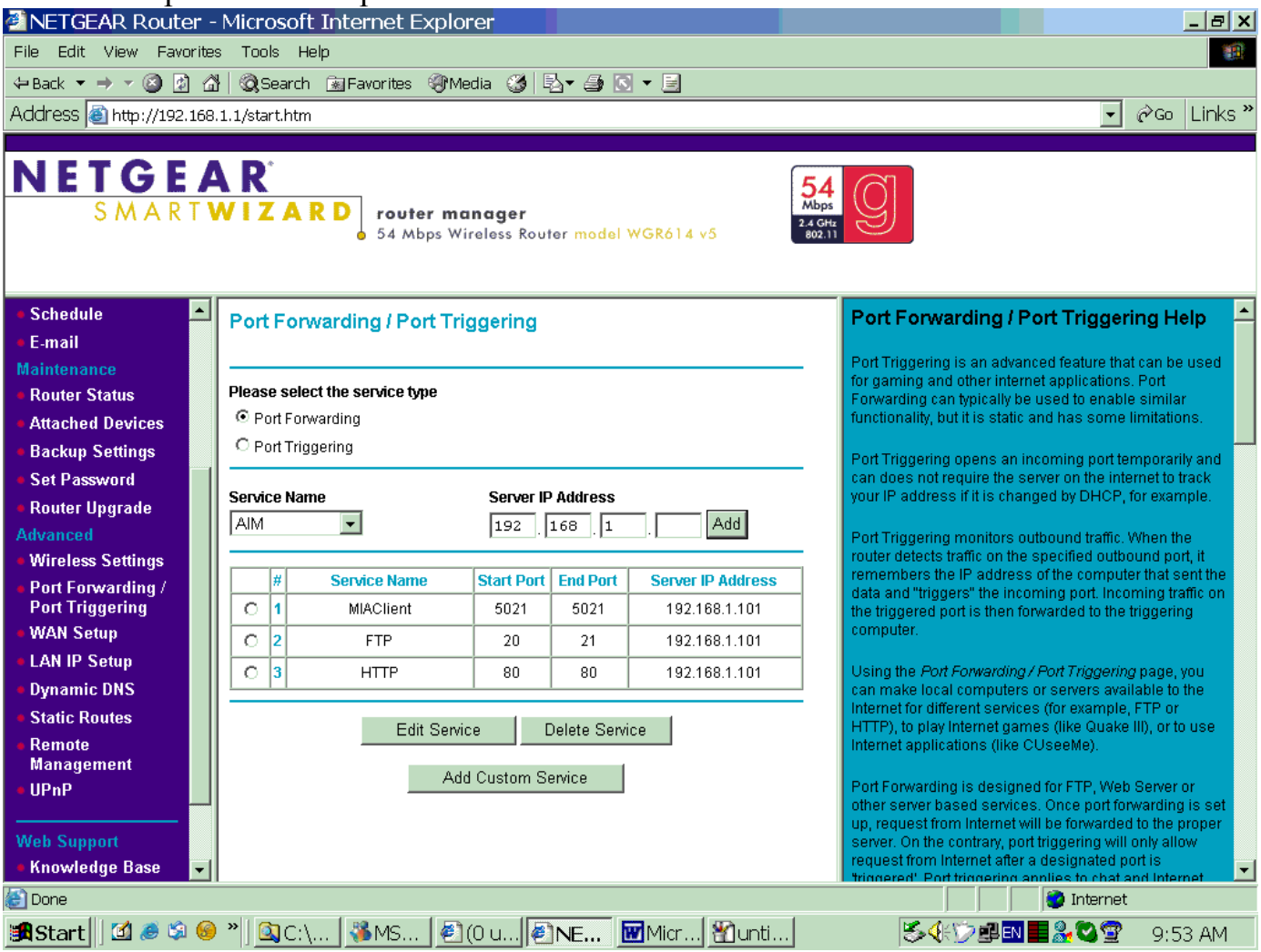
Router Setup [Important] 8/5/2006

1. Make sure to set DMZ to ON and its IP address to the IP of the PC that run CAT.
   For example if PC that run CAT is 192.168.1.10, then turn on DMZ and set IP to 192.168.1.10.
   So data and command between Client device and CAT server can communicate each other.

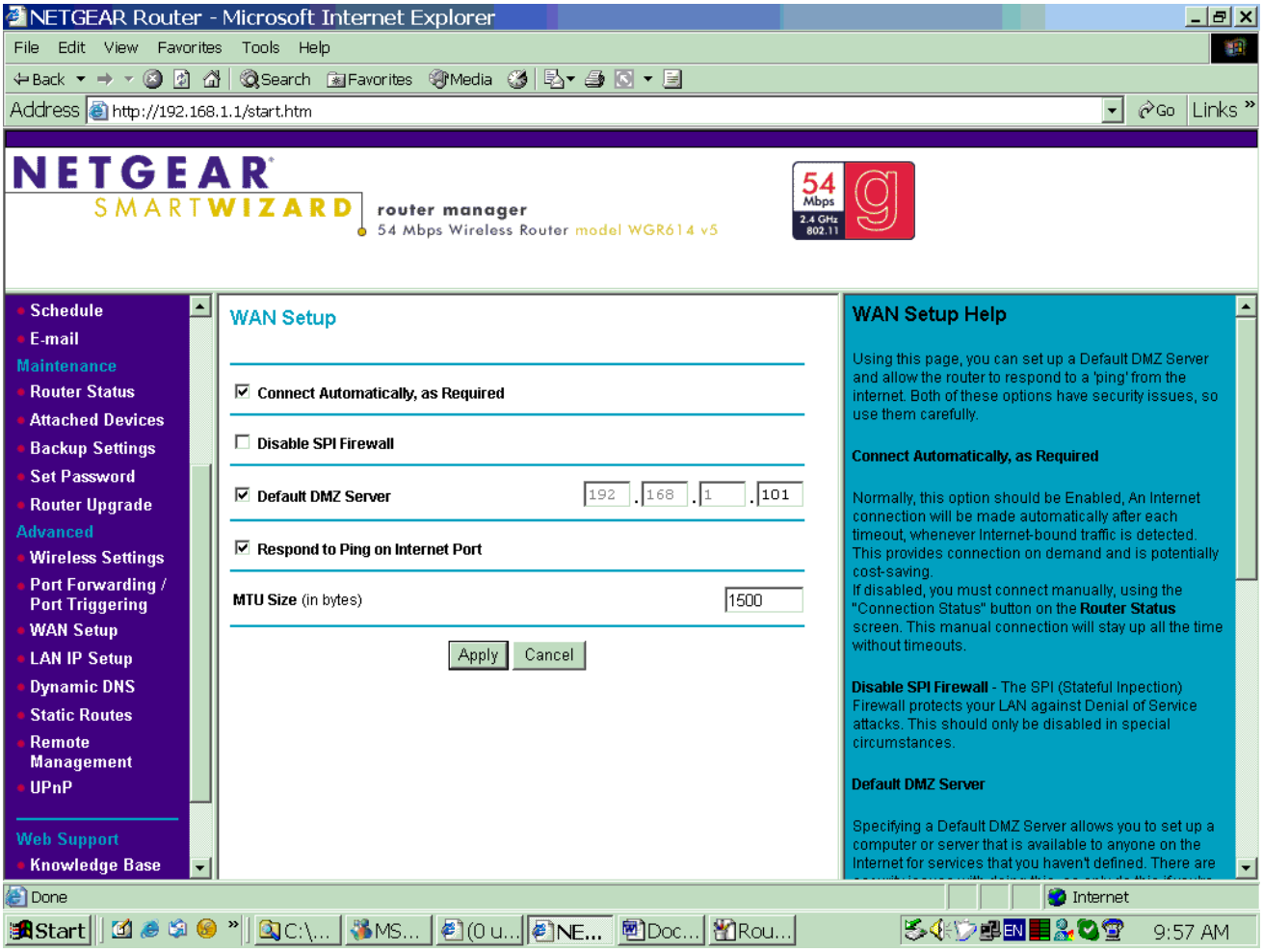
2. Make sure to enable “Port Forwarding” settings to Start:80, End:5021, IP: 192.168.1.10
   Otherwise only commands between client and this server PC can go thru, but not data file like playlist.mpl

3. ICS uses port 80 and port 5021, so these two ports must be open to let ICS command and files go thru between client device and ICS program.

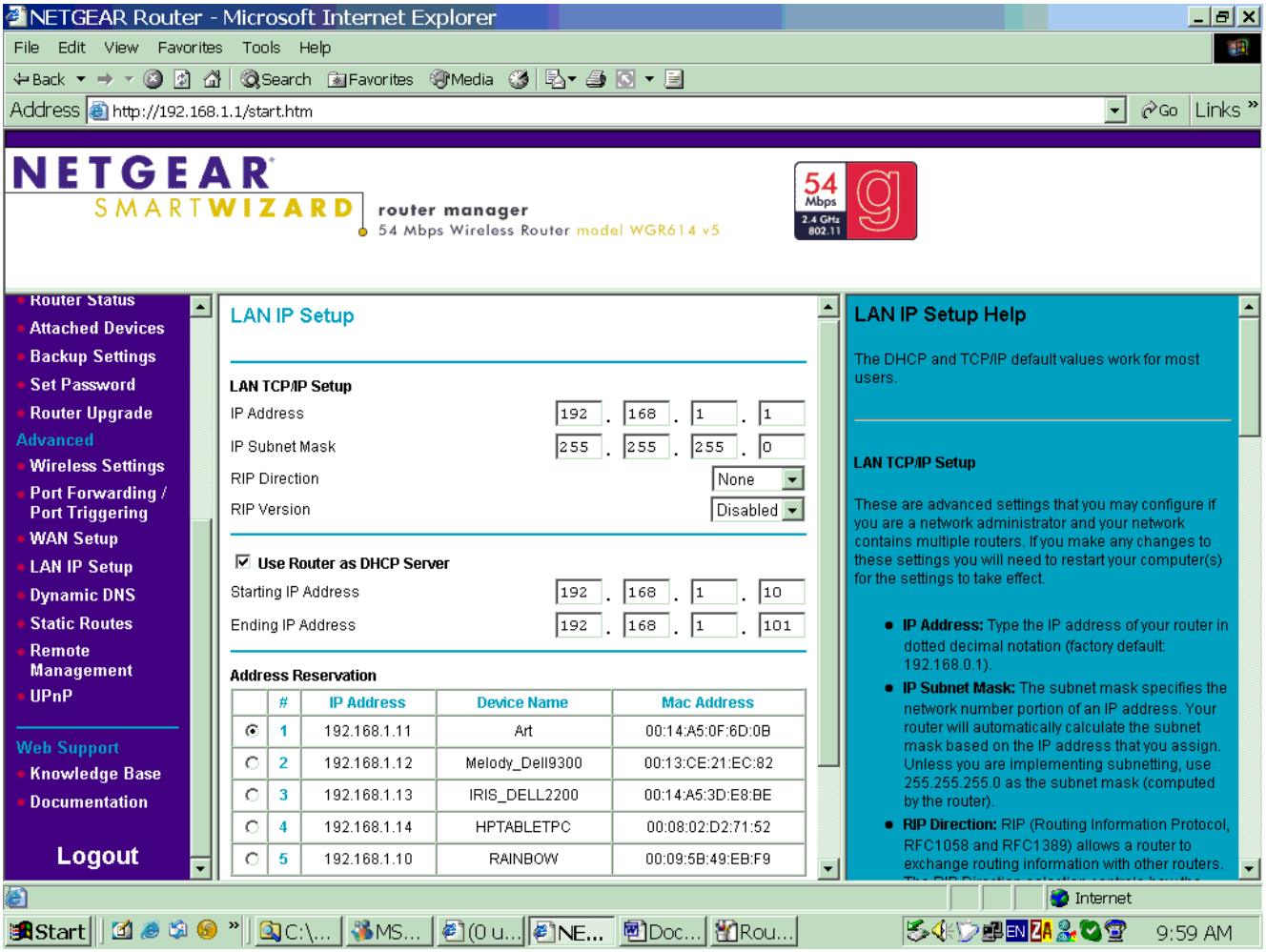
- Setup Client to 5021 port
- Setup FTP to 20 and 21 port
- Setup HTTP to 80 port


NETGEAR Router - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://192.168.1.1/start.htm
Go Links
NETGEAR
SMARTWIZARD
router manager
54 Mbps Wireless Router model WGR614 v5
54 Mbps 2.4 GHz 802.11g
Schedule
E-mail
Maintenance
Router Status
Attached Devices
Backup Settings
Set Password
Router Upgrade
Advanced
Wireless Settings
Port Forwarding / Port Triggering
WAN Setup
LAN IP Setup
Dynamic DNS
Static Routes
Remote Management
UPnP
Web Support
Knowledge Base
Port Forwarding / Port Triggering
Please select the service type
Port Forwarding
Port Triggering
Service Name
AIM
Server IP Address
192 168 1
Add
Service Name Start Port End Port Server IP Address
1 MIAClient 5021 5021 192.168.1.101
2 FTP 20 21 192.168.1.101
3 HTTP 80 80 192.168.1.101
Edit Service
Delete Service
Add Custom Service
Port Forwarding / Port Triggering Help
Port Triggering is an advanced feature that can be used for gaming and other internet applications. Port Forwarding can typically be used to enable similar functionality, but it is static and has some limitations.
Port Triggering opens an incoming port temporarily and can does not require the server on the internet to track your IP address if it is changed by DHCP, for example.
Port Triggering monitors outbound traffic. When the router detects traffic on the specified outbound port, it remembers the IP address of the computer that sent the data and "triggers" the incoming port. Incoming traffic on the triggered port is then forwarded to the triggering computer.
Using the Port Forwarding / Port Triggering page, you can make local computers or servers available to the Internet for different services (for example, FTP or HTTP), to play Internet games (like Quake III), or to use Internet applications (like CUseeMe).
Port Forwarding is designed for FTP, Web Server or other server based services. Once port forwarding is set up, request from Internet will be forwarded to the proper server. On the contrary, port triggering will only allow request from Internet after a designated port is
Done
Internet
Start
9:53 AM

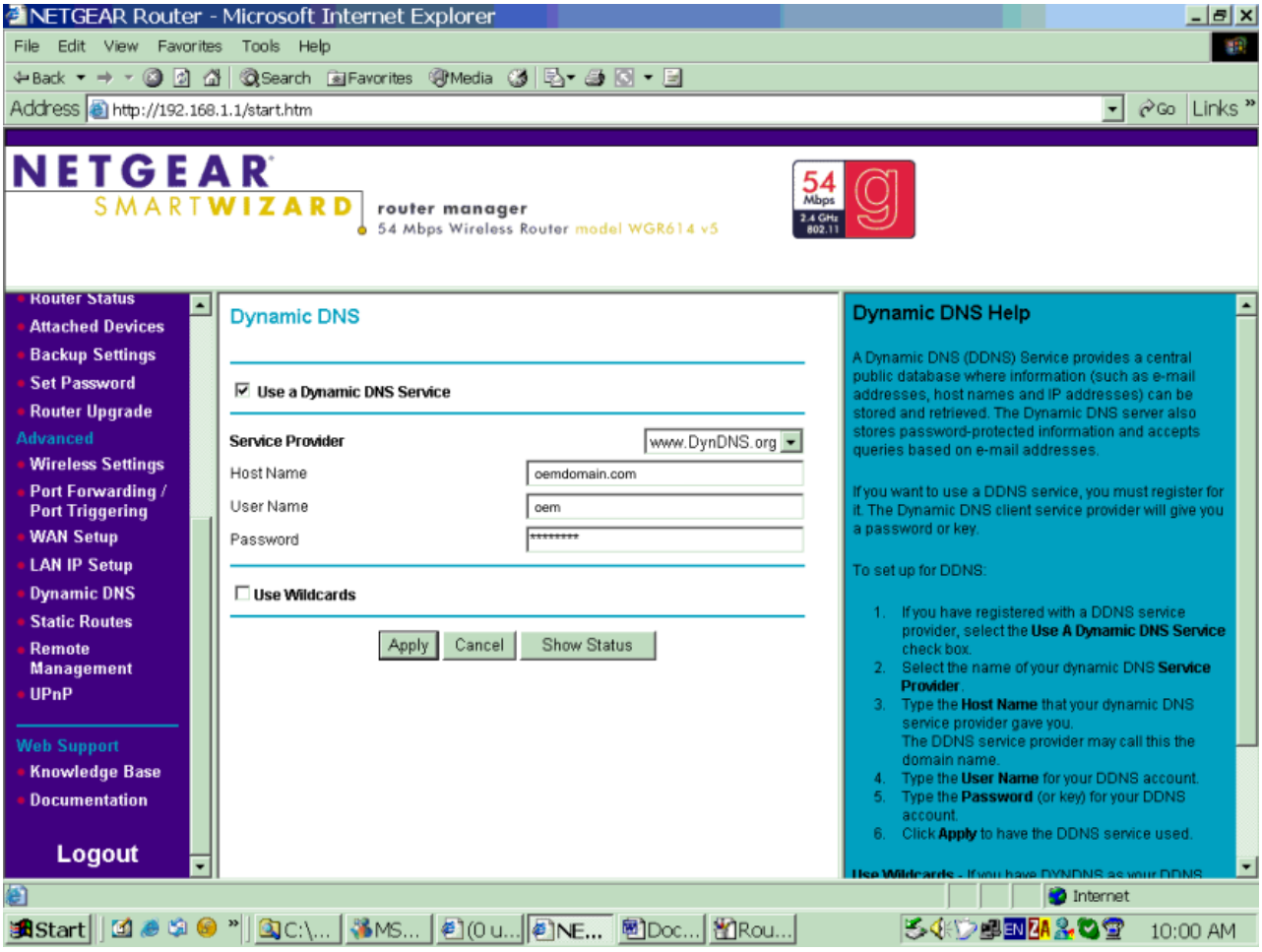
- Turn on DMZ server and input your PC server’s IP address


NETGEAR Router - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://192.168.1.1/start.htm
Go Links
NETGEAR
SMARTWIZARD
router manager
54 Mbps Wireless Router model WGR614 v5
54 Mbps 2.4 GHz 802.11g
Schedule
E-mail
Maintenance
Router Status
Attached Devices
Backup Settings
Set Password
Router Upgrade
Advanced
Wireless Settings
Port Forwarding / Port Triggering
WAN Setup
LAN IP Setup
Dynamic DNS
Static Routes
Remote Management
UPnP
Web Support
Knowledge Base
WAN Setup
Connect Automatically, as Required
Disable SPI Firewall
Default DMZ Server
192 . 168 . 1 . 101
Respond to Ping on Internet Port
MTU Size (in bytes)
1500
Apply
Cancel
WAN Setup Help
Using this page, you can set up a Default DMZ Server and allow the router to respond to a 'ping' from the internet. Both of these options have security issues, so use them carefully.
Connect Automatically, as Required
Normally, this option should be Enabled, An Internet connection will be made automatically after each timeout, whenever Internet-bound traffic is detected. This provides connection on demand and is potentially cost-saving.
If disabled, you must connect manually, using the "Connection Status" button on the Router Status screen. This manual connection will stay up all the time without timeouts.
Disable SPI Firewall - The SPI (Stateful Inpection) Firewall protects your LAN against Denial of Service attacks. This should only be disabled in special circumstances.
Default DMZ Server
Specifying a Default DMZ Server allows you to set up a computer or server that is available to anyone on the Internet for services that you haven't defined. There are
Done
Internet
Start
9:57 AM

- Turn on DHCP and set a range (optional)


NETGEAR Router - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://192.168.1.1/start.htm
Go Links
NETGEAR
SMARTWIZARD
router manager
54 Mbps Wireless Router model WGR614 v5
54 Mbps 2.4 GHz 802.11g
Router Status
Attached Devices
Backup Settings
Set Password
Router Upgrade
Advanced
Wireless Settings
Port Forwarding / Port Triggering
WAN Setup
LAN IP Setup
Dynamic DNS
Static Routes
Remote Management
UPnP
Web Support
Knowledge Base
Documentation
Logout
LAN IP Setup
LAN TCP/IP Setup
IP Address 192 . 168 . 1 . 1
IP Subnet Mask 255 . 255 . 255 . 0
RIP Direction None
RIP Version Disabled
Use Router as DHCP Server
Starting IP Address 192 . 168 . 1 . 10
Ending IP Address 192 . 168 . 1 . 101
Address Reservation
IP Address Device Name Mac Address
1 192.168.1.11 Art 00:14:A5:0F:6D:0B
2 192.168.1.12 Melody_Dell9300 00:13:CE:21:EC:82
3 192.168.1.13 IRIS_DELL2200 00:14:A5:3D:E8:BE
4 192.168.1.14 HPTABLETPC 00:08:02:D2:71:52
5 192.168.1.10 RAINBOW 00:09:5B:49:EB:F9
LAN IP Setup Help
The DHCP and TCP/IP default values work for most users.
LAN TCP/IP Setup
These are advanced settings that you may configure if you are a network administrator and your network contains multiple routers. If you make any changes to these settings you will need to restart your computer(s) for the settings to take effect.
IP Address: Type the IP address of your router in dotted decimal notation (factory default: 192.168.0.1).
IP Subnet Mask: The subnet mask specifies the network number portion of an IP address. Your router will automatically calculate the subnet mask based on the IP address that you assign. Unless you are implementing subnetting, use 255.255.255.0 as the subnet mask (computed by the router).
RIP Direction: RIP (Routing Information Protocol, RFC1058 and RFC1389) allows a router to exchange routing information with other routers.
Internet
Start
9:59 AM

If your PC server's IP is assigned by DSL or cable modem with dynamic IP, not static IP. Then you need to setup a DNS host name, please register your DNS host name at www.dyndns.org. And program your user name and password in your router. When router powers up, it will log in to dyndns.org with your host name. And you set your client's server as host name instead of IP in the Setup screen, for example: www.oemdomain.com . Client will log in to dyndns.org site to get your router's IP address of your PC server. So Client will connect to your PC server.


NETGEAR Router - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://192.168.1.1/start.htm
Go Links
NETGEAR
SMARTWIZARD
router manager
54 Mbps Wireless Router model WGR614 v5
54 Mbps
2.4 GHz 802.11
Router Status
Attached Devices
Backup Settings
Set Password
Router Upgrade
Advanced
Wireless Settings
Port Forwarding / Port Triggering
WAN Setup
LAN IP Setup
Dynamic DNS
Static Routes
Remote Management
UPnP
Web Support
Knowledge Base
Documentation
Logout
Dynamic DNS
Use a Dynamic DNS Service
Service Provider
www.DynDNS.org
Host Name
oemdomain.com
User Name
oem
Password
Use Wildcards
Apply
Cancel
Show Status
Dynamic DNS Help
A Dynamic DNS (DDNS) Service provides a central public database where information (such as e-mail addresses, host names and IP addresses) can be stored and retrieved. The Dynamic DNS server also stores password-protected information and accepts queries based on e-mail addresses.
If you want to use a DDNS service, you must register for it. The Dynamic DNS client service provider will give you a password or key.
To set up for DDNS:
1. If you have registered with a DDNS service provider, select the Use A Dynamic DNS Service check box.
2. Select the name of your dynamic DNS Service Provider.
3. Type the Host Name that your dynamic DNS service provider gave you. The DDNS service provider may call this the domain name.
4. Type the User Name for your DDNS account.
5. Type the Password (or key) for your DDNS account.
6. Click Apply to have the DDNS service used.
Internet
Start
10:00 AM